# Journal

OF THE

# American Dietetic Association

*Edited for the Association Under the Direction of the Journal Board*

By

MARY P. HUDDLESON

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# THE WAR AND THE AMERICAN DIETETIC ASSOCIATION: A REVIEW[1]

FRANCES MACKINNON

*President, 1942-43, The American Dietetic Association*

THE American Dietetic Association has passed the first milestone in the second quarter-century of its existence. In these twenty-six years the organization has grown in strength and prestige derived from its program to improve the training of dietitians, to increase the facilities for that training, and to stimulate its members to higher professional achievement. Its policies have been as conservative as one might expect of a professional group whose basic training is in the biological sciences and whose work has been allied principally with the fields of medicine and education. Its Constitution has undergone frequent revisions as the expansion of the professional field has widened the sphere of its responsibilities, but the basic pattern of its government has remained essentially the same. The activities of its four sections have kept within the framework of strict professionalism and have been intensive rather than extensive in their scope. The organization has been effectively articulate through its JOURNAL and sound enough in its fiscal policies to add new services without asking its members to share the constantly increasing financial obligations. We can be thankful that the American Dietetic Association has been granted the boon of achieving its maturity in times of peace when a slow, steady, consistent growth was possible.

For two years the stresses and strains incident to a state of war have served somewhat fortuitously to test the soundness and effectiveness of this professional organization. On the whole, it has stood the test remarkably well. However, the pattern of its administrative and governmental structure is showing inadequacies, some of which were anticipated while others might never have become apparent while our country was at peace. We would be a poor organization, indeed, if our effectiveness were so limited as not to be measured by the demands of a state of war. For purposes of illustration we may select a few of our major responsibilities, appraise the effectiveness with which we are meeting them, and speculate as to a course of action in the future.

First is the responsibility to provide qualified personnel for needs which have increased enormously since the beginning of the war. The greatest demand both as to numbers and to urgency has come from the Army. A year ago your Executive Board and the War Activities Council met many times and conferred long into the night reviewing, accepting and rejecting, and revising plans for supplying the seven hundred dietitians which the Army would need within the year. Our plight was not without some ironic aspects. Having labored against considerable odds for twenty-five years to improve the quality of dietetic service which our members were offering to the American people, the possibility of having to compromise with quality to get quantity seemed a mockery. The plans which finally evolved have produced the desired results despite some friction and rattles in the machinery.

In the meantime the progress of the war has forced the Army to double its quota of dietitians and more of them must be assigned to overseas duty. Since our last meeting dietitians serving with the Army have been awarded military status, the implications of which have not sufficiently impressed us. We note this in the reluctance of dietitians to accept assignments outside the United States. Aside from the challenging and adventurous aspects of foreign duty, it is difficult to see why the dietitian as a member of a military unit should be reluctant to serve where she is needed most, an obligation which is assumed without question by the soldier. Each one of us needs to recognize the immediate and insistent demand for dietitians in military service. We need to remember, too, that in military as in civilian hospitals, we are still in the position of having to prove our worth. Demonstrating the best use of her services still calls for the exercise of patience and imagination on the part of the individual Army dietitian.

As if the military needs were not enough to test our strength, the civilian hospitals are employing a greater number of dietitians than before the war. Several factors may be responsible for this unexpected development: the National Nutrition Program, the shortage of nurses, the migration of hospital workers to industry, food rationing with the added complexities of food shortages, an increase in available funds. Furthermore, the industrial nutrition program has been responsible for the employment of dietitians in industrial cafeterias; colleges and universities which carry military training programs need additional personnel for their food service units. Local public health services and the administrative organization of the National Nutrition Program also have asked for new workers.

This sudden increase in the demand for dietitians cannot be met immediately, even by the employment of a greater number with but minimum qualifications. The whole problem of personnel shortages was reviewed at the annual meeting last year and several solutions were suggested. As a result, a few collegiate departments are offering graduate training in institutional food service to women with academic preparation in home economics and at least one industrial organization is planning an apprenticeship for dietitians entering the industrial field. One answer to the shortage in hospitals is the plan for volunteer part-time service of Dietitian's Aides to assist the dietitian. The present Executive Board agreed to cooperate with the American Red Cross in the training of these volunteer Dietitian's Aides. The program has been slow getting under way but it is hoped that the use of these trained volunteers may relieve to some extent the demands upon professionally trained personnel.

The failure of the American Dietetic Association to supply the unprecedented number of requests which come to its Placement Bureau is not due, in my opinion, to a defect in its organization. Several other professional groups find themselves in the same quandary. Rather, the present state of affairs calls for an attempt at a common understanding within our own ranks as to which needs can be met *only* by personnel trained according to orthodox, professional standards and which by workers equipped with an acceptable amount of emergency preparation. We need to be agreed on the minimum personnel requirements for a fair working organization. Certainly it is our duty to see that the time and skill of trained personnel are used as intelligently and as economically as possible and we should face this responsibility immediately before any outside force compels us to do so.

A second responsibility concerns our obligation to furnish instruction in nutrition and dietetics to our co-workers in the medical field. The instruction of student nurses was one of the first duties assigned to the dietitian in the early years of her existence as part of a hospital staff. Several of our members have written excellent textbooks for use by the student nurse. However, the American Dietetic Association has shown a rather fitful interest in that portion of the nursing curriculum having to do with nutrition and dietetics and the relation of the content to

[1] President's address at the Business Meeting of the Association, Pittsburgh, October 20, 1943.

the testing directed by state boards. Although the courses of study in medicine and surgery advance progressively in subject matter and techniques to the end of the nurse's training period, the teaching of dietetics in many instances ceases at the end of the sophomore year. The subject matter of dietetics is an exciting body of information and the hospital wards offer the best kind of laboratory in which the student nurse under constant direction can develop her knowledge as her training progresses. As a commentary on our teaching, it is somewhat disillusioning to find that many public health nurses are handicapped in their work because they cannot apply the principles of nutrition in situations outside the hospital routine. After three years of exposure to the best possible opportunity for learning the basic principles of dietetics, they must devote postgraduate study to elementary courses in nutrition when they should be doing advanced work in the same subject.

The Professional Education Section has undertaken a five-year study in the teaching of nutrition to student nurses. They have secured the cooperation of the National League of Nursing Education and have availed themselves of the services of a consultant in curriculum construction and testing. The study will derive continuity from the interest and guidance of this Association's Educational Director. It is hoped that in the near future we may make a similar effort to criticize and improve the teaching of dietetics in schools of medicine.

A third responsibility concerns our program of public relations. Our field is open to every fanatic and crackbrain, and every man who eats three meals a day feels that on the basis of his personal experience he has a right not only to his own opinion but also the additional right to generalize for his family, his friends, and mankind. Consequently, the work of our Association and its membership calls for constant interpretation and even justification. What we ordinarily know as publicity—newspaper and magazine articles, participation in radio programs—is helpful, but only in a limited way. The work of most of us is a kind of down-to-earth, day-by-day performance which does not give rise to the spectacular or the heroic; only occasionally does it offer good material for publicity.

To me it has never seemed important that we strive to do our good works in the sight of all men. However, it may be the better part of wisdom to appraise the opportunities offered by the times. Because food and labor shortages touch the lives of all of us, the dietitian who does a good job of feeding the people for whom she is responsible and the nutritionist who gives soundly practical advice in terms that can be readily understood are receiving more recognition for their services than at any previous time. The volunteers who are being trained to assist us in hospitals and school lunchrooms cannot help acquiring a realization of the worth of the work we are trying to do. The volunteer service offered by dietitians in local nutrition programs is bringing the institutional worker into more direct contact with the normal life of the community. In an article entitled "Women in This War," Ada L. Comstock, president of Radcliffe College, writes: "In a characteristic way, we are calling in experts; and already dietitians and women with home economics training are being overwhelmed with opportunities to lead our communities in making the existence of shortages a reason for better understanding of the essentials of proper nourishment. It is one of the instances in which misfortune can be made a means of progress and enlightenment." All of these new activities constitute the most effective kind of publicity for the professional worker.

What may well be of more concern to us is our contribution, as members of a profession, to the solution of some of the political matters which come within our purview. During the year there have been many demands upon the American Dietetic Association to support various legislative measures. Many of these demands have come from groups of the so-called pressure type. Certainly it is our obligation as professional workers in the fields of foods and nutrition to hold an enlightened viewpoint on the worth of these measures and to express our opinions to legislators. It is doubtful, however, if the American Dietetic Association as such should lend its support to any legislation which is not directly concerned with our status as a profession. Our support of the bill which awarded military status to Army dietitians was clearly an obligation because this legislation enabled the dietitian to function more effectively as a member of a military unit. On the other hand, support of legislation having to do with certain restrictions in the sale of foodstuffs does not seem to be within the province of our national organization. Rather it would seem that our obligation in this regard should be discharged through our local and state associations, especially since much of our food legislation has as its purpose the protection or regulation of local interests. There is need for active legislative committees in the state associations. Support of legislation which is based on the considered judgment of our members is a type of activity in the field of public relations which merits the respect and confidence of the public in our profession.

Looking from the state and national to the international scene, it seems evident that the future has a great deal in store for us. The American Dietetic Association is unique in the world of professional organizations with regard to the scope and effectiveness of its activities. During the past year many visitors from other countries have called at our office to ask for advice in developing a program of training for dietitians in their own countries. In the immediate future we may be requested to provide internships for representatives from abroad; even to provide funds for such training. The Association has conducted a twenty-five-year experiment in the training of dietitians, with benefit to the health of our people. It is hoped that we will have the foresight and generosity to make those benefits available to the people of other lands.

A fourth responsibility has to do with the administration and government of our Association. The need for some changes in our administrative organization has been apparent for several years and the heightened activity of the war period has made some immediate changes imperative. The problem of achieving continuity in the work of each of the four sections perplexes every executive officer and every Board. At times projects of a very high order are submitted by section chairmen but frequently and quite inadvertently these are held in abeyance because a new Board has other and more insistent interests. It is impossible for a President during her one-year term of office to coordinate all the section projects and develop those which promise to be most useful. Furthermore, each President starts some program which in her opinion is of immediate importance to the welfare of the Association; the next President, too, will have her own views so she merrily rides her hobby, all but forgetting the efforts of her predecessor. This jockeying has its virtues in balancing the general program of the Association but it is also very wasteful of effort. No good program of public relations, no continuity in the maintenance of contacts with other professional and governmental organizations can be maintained by an officer who serves for one year.

Last year, in an effort to correct this deficiency in the conduct of the affairs of the Association, the Reorganization Committee, appointed by the previous Board, recom-

mended the employment of an Executive Director. This recommendation was accepted by the present Board and the new member of the office staff assumed her duties on December 1, 1942. Since there was no precedent for this position, she proceeded to outline the responsibilities and duties of the office. Mrs. Katherine Mitchell Johnson was particularly well equipped to make such an analysis because of her years of service in various offices of the Association, including that of president. Her acceptance of the appointment was for a temporary period only. During the year she has been able to define the duties of the position and with the advice of the Executive Board and the Reorganization Committee, to suggest a plan of office organization which will bring about a better alignment of the responsibilities of the office staff, the Executive Board and the various committees. The Executive Board has accepted the plan which will be published in the proceedings of this meeting.

The Executive Director[2] also has been able to serve us effectively in the field of public relations and to represent our interests to many allied groups. After a trial period of ten months, it is the opinion of the Executive Board that this position in the office organization should be maintained.

During the early years of our organization, the Business Manager sold advertising for the JOURNAL. Due to the growth of the Association and the JOURNAL, the work of the business office became too heavy for one person to handle. In 1939 the Executive Board authorized the employment of a special representative to sell advertising on a commission basis. With the realignment of responsibilities of the office staff which transferred to the Executive Director many of the duties formerly assigned to the Business Manager, it seemed possible to dispense with the special representative and to have his activities taken over by the Business Manager. This move would center again in our office all of the business of the Association with the exception of the JOURNAL editorial office.

On September 10, 1943, the present Business Manager, Dorothy I. Lenfest, who has served the Association so effectively for twelve years, tendered her resignation. Therefore, for the present, the services of the special representative will continue. The Executive Board has recommended that at some time in the near future, a business manager of the JOURNAL be employed, at which time we will be able to dispense with the services of the special representative.

Now as to our government. As citizens of the United States we are used to the democratic idea of dividing the responsibility for governing between executive and legislative branches. Some years ago the House of Delegates was created as a legislative body with very limited powers. This conservative experiment has served to demonstrate that such a body, if it is to assume any significant responsibility, must have a stable membership. It should also represent the membership in some numerical ratio of delegates to members, using the state association as the unit of reference. It is very important to the future of this organization that some means be devised to ensure more opportunity for the direct expression of the views of the membership than is permitted by our present Constitution. It is so important that to make it possible we should undertake an increase in our own personal financial support of the Association. After viewing the shifting trend in membership in the House of Delegates during the six years of its existence, it is evident that the national organization will have to give financial assistance to the state associations to help defray the expenses of delegates to the annual meeting. Otherwise we cannot develop a legislative body with sufficient experience adequately to represent the interests of our membership. The most significant constitutional revisions upon which you are to vote will make possible the creation of new power for the House of Delegates, representation from state associations in proportion to membership, and the provision of financial assistance to ensure stability to the legislative body of our Association.

Your President has served the Executive Board for four years. The experience has strengthened her faith in the ability of trained women to view the common problems of their profession objectively and to solve them with a single-mindedness that could serve well as a model for more august bodies. In a preface to Voltaire's satirical romance, *Zadig*, the translator makes the statement that in any organized group the business of government very soon grows stale, that after a time it ceases to be attractive to clever minds and that inevitably the mediocre take over. Such a comment could never be applied to the government of this Association. Each year new officers and chairmen bring with them new interests and a fresh enthusiasm for solving the old problems. The very nature of our organization with its program for training young dietitians brings, in constant flow, a new and youthful stream of life, offsetting the staleness which otherwise would be inevitable.

Obviously this Association cannot be governed to the satisfaction of each one of its members. A human institution has no life of its own which dictates that it will unfold according to a predictable, organic pattern. The whole process of human progress is one of fits and starts and only a historical perspective can measure the whole distance we have covered from our humble beginning. At any point where an innovation is made, there is bound to be resistance. We accept gratefully the existence of an organization which protects and furthers our interests as a profession and in doing so we cannot accept it as something static. Our function as members of this Association is to make its growth orderly and to protect it by our Constitution. The responsibility is a serious one. We must not forget that we offer ourselves as a trustworthy medium through which the rapidly unfolding body of nutritional knowledge is translated into practical terms and practices. To this work we are consecrated, that suffering may be relieved and that humanity may enjoy a larger measure of health and happiness.

[2] Editor's Note: This title by action of the present Executive Board has been changed to Executive Secretary.

***A Dietitian Writes From Overseas.*** Our hospital—now that it is complete, is very satisfactory. We have a grand group of doctors and nurses and I consider myself fortunate to belong to such a unit. Our first few months here were crowded with work and problems. At the beginning we worked endless hours endeavoring to take care of a more than capacity load in a hospital that was hardly set up. There were weeks when our census far exceeded our anticipated capacity but tents were erected and we managed to accommodate all that were sent our way. . . . It has been a wonderful year and I have loved every moment of it. I have grown to realize it was the wisest and best move I have ever made and I am glad foreign duty was my destiny.—*Second Lt. Margaret G. Murray, Medical Department Dietitian, A. U. S.*

# NUTRITION UNDER RATIONING IN ENGLAND[1]

V. P. SYDENSTRICKER, M.D.

*School of Medicine, University of Georgia, Augusta*

THE effect of rationing on the nutrition of a nation is a matter of the greatest importance to everyone who has responsibility for the success of the agricultural and industrial programs essential to victory, as well as to those of us whose primary interest is in dietetics and nutrition. Our own scheme of rationing has not been in operation long enough for its effects to be evaluated. In England a rather rigorous rationing system has been in force for about four years and you may be interested in hearing how the British have developed this system and subsisted under it.

Even before the war a program for rationing had been worked out which seemed satisfactory but which did not take into account the possibility of the conquest of the Low Countries, Denmark, and France. It was assumed, too, that various devices developed by the Admiralty would neutralize the submarine menace to imports from the dominions and colonies and from South America and the United States. All these premises proved unwarranted, and June 1940 found England deprived of her main sources of beef, eggs, butter, cheese, and bacon as well as many staple vegetables and citrus fruits. In addition, the whole agricultural policy was affected by a shortage of fertilizers formerly obtained from the Continent. For a while the situation was very acute for there were no adequate stores of foods high in protein, fat, and vitamins. Obviously it was impossible to increase domestic food production sufficiently to make up for the loss in imports, for approximately 60 per cent of England's food had been imported. Along with strict rationing, a new agricultural plan was adopted.

## THE WARTIME AGRICULTURAL PLAN

By various means the amount of land under cultivation has been augmented by about 50 per cent and crop losses from insects, plant diseases, and flooding have been greatly reduced by the application of methods for disease and pest control and by drainage. A great effort has been made to improve farming methods and to save manpower on farms by increasing the use of farm machines. This has involved much education of farmers in new methods and the use and care of machines, and naturally there has been opposition at times. Good farming has become of such importance to the national welfare that farmers unwilling to follow advice or incapable of following instructions which would increase the productivity of their farms can be dispossessed for the "duration" and their farms placed under the management of competent agriculturists. Every effort has been made to restrict crops to those most productive and suited to the English climate.

The results of the wartime plan for agriculture have been impressive. The production of potatoes has increased 80 per cent, cereal grains 50 per cent, and there has been an enormous increase in vegetable crops. On the basis of tonnage the British have increased home production of food from about 40 to about 65 per cent. This increase, however, has been almost entirely in production of carbohydrate foods and green vegetables, mainly for human consumption. It has been impossible to increase domestic sources of protein and fat. In addition to the great increment of food supplied by increased acreage under professional cultivation, an important contribution is made by the "allotments" which correspond to our victory gardens. Every family is urged to cultivate an allotment and every city and town is surrounded by a zone of these family garden plots; there are millions of them, mostly well tended and brave with potatoes, cabbages, Brussels sprouts, and beans.

From the beginning it has been axiomatic that food fit for human consumption must not be fed to animals. Since pigs and chickens are direct competitors for food which people can eat, there has been a drastic reduction in their numbers; they are still raised, but mostly in small herds and flocks which can be fed on the scanty scraps, garbage, and spoiled grain and vegetables which are available. Dairy cattle, being efficient converters of food which otherwise would be unfit for human consumption, into badly needed milk, are favored and every effort is made to increase the number of milch cows. Beef cattle have almost disappeared and British beef today comes from bull calves, sterile heifers, and cows too old for milk production. Sheep are not competitors for human food, but it has not been possible to increase their number significantly because great areas of grassland have been brought under the plough. Sheep also require men to tend them and manpower is one of England's most serious problems.

In spite of an intelligent and amazingly productive agricultural program, England remains dependent upon import for most of the wheat and a tremendous proportion of meat and fat which her population requires. In addition, there are serious shortages of milk, eggs, and citrus fruits which cannot be relieved under present circumstances.

## THE FOOD RATIONING SYSTEM

The British system of rationing seems much simpler than ours. There is a Ministry of Food which has control of food supplies at their source. It also controls the channels of distribution and purchases all rationed foods and many important unrationed items directly from the producers. Prices are fixed by law, but distribution is largely through regular trade channels and most of the administrative problems of distribution are handled by representatives of the food industries. When the Government requisitions stocks of certain foods they are not taken away from regular dealers; the Ministry of Food merely assumes control of the distribution. Other items are controlled by requiring the original purchasers to secure licenses and by prohibiting sale to any but licensed buyers. Such licensed buyers, in most instances, are agencies representing or appointed by the Ministry of Food. The prices paid to producers for a number of important foods are set and subsidized by the Government in order to stabilize the retail price and to encourage production. The fact that England is small in area makes it possible to enforce many useful regulations which would be entirely impractical in a country as large as ours, and since the bulk of the meat, wheat, fat, and canned goods is imported, control is greatly facilitated.

All purchase, importation, and disposal of wheat are under the control of the Ministry of Food which subsidizes the long-established Federation of Corn Trades Associations as its agent. The milling industry also is controlled by the Ministry of Food and since March 1942 no flour other than the National Wheatmeal of 85 per cent extraction has been produced. Bakers and manufacturers of breakfast cereals are licensed and the variety of their

[1] Presented before the American Dietetic Association, Pittsburgh, October 19, 1943. According to Dr. Sydenstricker, in preparing this paper free use was made of information contained in various reports of the Ministry of Food and the Ministry of Health. Much factual information regarding the British ration is from the brochure, *Food Control in Great Britain*, published by the International Labour Office, Montreal, 1942.

products is sharply limited. Bakers, for instance, may make only four types of loaves and bread cannot be wrapped or sliced. Rice, oats, barley, rye, and dried peas and beans are controlled in the same fashion as wheat. The use of grain for brewing and distilling is regulated as well as licensed. The bran from milled grain and supplies of unmillable grain are rationed for stock feeding.

Meat is very thoroughly controlled. The Ministry of Food buys and imports all supplies from abroad. Domestic food animals must be registered with the Ministry of Agriculture and when they are ready for sale the owner must notify the Ministry of Food. There are central markets where cattle, sheep, and hogs are brought for grading and sale and only government-controlled abattoirs may slaughter animals for market. The auctioneers who conduct the sales and the owners of abattoirs are paid by the Ministry of Food. Bacon is cured by registered firms licensed by the Ministry. There are eight Wholesale Meat Supply Areas in England in which the dealers are associated in Meat Supply Associations; these, in turn, supply the retail dealers in their respective areas. Two exceptions to meat control exist. The farmer with a herd of pigs may kill two each year for his household use and "pig clubs" can be formed by groups of suburban families who agree to feed their garbage to a pig and divide the meat equitably when the communal pet is ready for slaughter. Fish, poultry, and rabbits are not rationed, nor are offal and the "war sausages" made with 45 per cent meat, but all wholesalers are licensed and retail prices are controlled. The distribution of fish is zoned to economize on transportation.

The fat situation in England is none too good. For many years the country has depended on imports for adequate supplies of butter and other edible fats. Margarine long has had a place in the average diet and there has been no milk trust to secure iniquitous and discriminatory taxation of margarine. Because fortified margarine is a useful substitute for butter, no great effort has been made to increase the importation of butter during the war. It has been much more economical to increase imports of vegetable and marine oils from which margarine can be made. Since the beginning of the war all edible fats have been under the control of the Ministry of Food and the manufacture of margarine has been licensed. All margarine must be fortified to contain 5000 units vitamin A and 400 units vitamin D per pound.

Milk is rationed on a priority basis which will be discussed later. The policy of the Ministry has been to encourage the direct consumption and increased home production of fresh milk and imports of dry and condensed milk. Before the war the Milk Marketing Board controlled the distribution of milk in England. This board has been continued as the administrative and distributing agent of the Ministry, though prices and priorities are determined by the latter which also buys and imports dry and condensed milk. The consumption of fresh milk has increased about 20 per cent during the war, but production has not kept pace. This increase in consumption has been brought about by prohibiting the use of fluid milk in baking, ice cream manufacture, and other industries where dry skim milk could be substituted. Dry skim milk has also been made available for household use. There is very little manufacture of cheese or of dry or condensed milk in England at present. Milk is one of the most heavily subsidized foods, and both producers and distributors participate in the subsidy.

No entirely satisfactory method for rationing eggs has been developed. England imported a great proportion of the eggs consumed before the war, and domestic production has been sharply reduced because of inability to feed poultry without encroaching upon supplies of food available for people. The present distribution is on a priority basis which practically eliminates fresh eggs from the diet of healthy adults. Every poultry-keeper is required to sell all eggs above the number to which the ration entitles him to licensed buyers or packing stations. The price paid is more than the retail ceiling price so there is little black marketing, though smuggling undoubtedly goes on. Needless to say, a government subsidy bridges the gap between the price paid to the producer and the retail price.

Potatoes, carrots, tomatoes, and onions are considered so essential that they are directly controlled by the Ministry of Food. Potatoes are the most important food crop in England. They furnish the bulk of the cheap calories in the diet and contribute significantly to the protein and vitamin content. The Ministry of Food constantly urges the people to eat more potatoes and less bread to conserve vital shipping space for men and munitions. The Ministry guarantees the grower's price for potatoes and buys all surpluses; distribution, too, is effectively controlled. Carrots and onions are bought and distributed by the Ministry in a manner similar to that employed for potatoes. Tomatoes are the only rich source of ascorbic acid produced in England in significant quantity and practically all are hothouse grown. Every owner of a hothouse must devote it to the production of tomatoes for six months of the year. Tomatoes may be sold only to licensed or specified buyers and distribution is supervised.

Those green vegetables which are produced in quantities sufficient to make them of significance in the national diet have price ceilings. There is supervision and, at times, direction of distribution. Effort is made to prevent local "gluts" but when they occur there is provision for the distribution of the surplus. Even allotment gardeners are urged not to produce more than they can use. Small surpluses may be sold directly to less fortunate neighbors but any considerable surplus is directed into local greengrocers' establishments. Luxury vegetables, such as asparagus, mushrooms, and artichokes, which are not produced in sufficient quantity to warrant regulation, constitute the major offerings of the more expensive restaurants.

While England produces much fruit, only apples and plums are controlled. Apples can be sold only to specified classes of priority purchasers and plums only to licensed buyers. The sale of berries and other soft fruits is not restricted, but prices are so regulated that it is much more profitable for the grower to sell to a jam manufacturer than to a fruiterer. Jam is an important rationed food with great morale value and most of the plums, cherries, and berries of all sorts go into jam. To save small crops of small fruits in rural areas, local jam-making establishments are set up. The work is done by local women volunteers, sugar is furnished and the jam taken over by the Ministry of Food. Oranges are imported in small quantities and reserved for young children.

Beet sugar production has been greatly augmented since the war began and domestic production almost meets the ration requirement. This has been made possible by drastic restrictions on the use of sugar in manufacturing and by the rationing of candies as well as sugar. Chocolate and cocoa are manufactured under license and sweet chocolate is included in the candy ration.

All imported canned meats and fish, canned vegetables and fruits, and dry milk and eggs are bought and imported by the Ministry of Food for distribution. Dry milk and eggs can be obtained under the ration in lieu of the fresh foods but everything else requires points.

### COMPARISON WITH OUR RATIONING SYSTEM

An important difference between our rationing system and that of the British is the matter of registration. In England every holder of a ration book is required to register with a food merchant for all rationed foods except tea. It is mandatory that one register with the same dealer for butter and margarine, and for sugar and jam. This scheme enables dealers to stock supplies in the most economical manner and also assures that customers receive their ration allowance. Unrationed foods which are distributed on the basis of registration also are equitably distributed. This system works back to the wholesaler. Wholesalers can supply retailers only with the amounts of food to which their customer registrations entitle them. Unrationed foods are distributed on the "datum principle," through which a dealer is supplied with a certain proportion of the amount of a given article which he disposed of during a selected period prior to the imposition of restrictions.

Another great difference between our scheme of rationing and that of England is that basic foods are rationed by price or weight and point rationing applies to relative luxuries. Only meat is rationed by price. Adults are allowed to buy a shilling and twopence worth per week; the child's ration is half this amount. At current prices this means 1 to 1½ lb. fresh meat. If ground lean meat is bought, such as the British call "mince," the ration has maximum value; if cuts with bone are selected there is a variable loss to the consumer. Other rationed foods are distributed by weight. Of bacon or ham the ration is 4 oz. per week; of edible fat, 8 oz., usually distributed as 2 oz. butter, 4 oz. margarine, and 2 oz. cooking fat; 2 oz. tea and 8 oz. sugar are allowed; the cheese ration varies with supplies from 2 to 8 oz. a week; jam and other sweet spreads are rationed by the month, 1 lb. per person. At Christmas, suet for plum puddings can be obtained on the fat coupons, and mincemeat in place of jam. Adults, in theory, are entitled to 2 pt. milk per week and 2 eggs per month on their ration coupons. Milk and eggs are rationed on a priority basis, to be mentioned later, and in practice only dry milk and eggs are obtainable. All canned goods (except certain soups), rice, dry breakfast cereals, dried fruits and pulses are rationed on points. The point value of different items is adjusted to available supplies and the point allotment for different ration periods is variable.

### SPECIFIC RATIONING PROVISIONS

Provision is made for the requirements of various population groups. Children get only half the amount of meat allowed adults but have priority for milk and eggs. Pregnant and nursing women share this priority. Diabetics can obtain extra amounts of meat and fat, for which they surrender their sugar coupons. Persons with hypoglycemia can secure extra sugar and those with nephrosis, extra meat. Patients with sprue or steatorrhea are allowed additional amounts of meat, for which they give up fat coupons. Sufferers from peptic ulcer, dysentery, colitis, and various conditions interfering with chewing and swallowing have priority for milk and eggs. Adequate provision is made for the dietary requirements of hospital patients. Vegetarians are permitted extra amounts of cheese, for which they surrender their meat and bacon coupons. Workers in various trades and occupations who do not have access to a hot midday meal are also given special consideration; an added 12 oz. cheese per week is allotted to miners, foresters, Land Army girls, railway and canal workers, charcoal burners, and certain other essential workers. During the harvest season farmers are permitted extra tea, sugar, and margarine so that "tea" may be served to harvesters in the field.

It is the policy of the Government to increase as much as possible the consumption of fresh milk by those who need it most. In accordance with this policy milk is distributed on a priority basis. Normal adults are entitled to 2 pt. per week, but if supplies are short, they may get none, all available supplies going to priority consumers. The priority groups are children, nursing and expectant mothers, the sick, and certain classes of workers. Children less than a year old receive 7 qt. milk a week, those between one and six get 7 pt. and those from six to eighteen, 7 half-pints. Pregnant and nursing women are allowed a pint a day, while invalids must have a physician's order for milk and may get a maximum of a quart a day. Workers in certain types of chemical and munitions plants are provided with one-half pint daily. Milk for children under five and for pregnant and nursing mothers is sold at the nominal price of 2d. a pint and if the family income is below 40s. a week, milk is free. This "free and cheap milk scheme" is part of the wartime rationing but children in school still get "school milk" under the prewar school milk program, every child applying being allowed one-third pint of milk a day at a cost of 1s. 2d. (24 cents) per month. Children whose parents are unable to pay this nominal sum receive milk free and any child designated by the school physician is furnished an extra third of a pint free. The cost of this whole program is borne by the Government. For cooking purposes dry skim milk is available on a nonpriority basis.

Like milk, eggs are distributed on priority. The ordinary consumer is allowed 2 eggs per month. Children under six, nursing and pregnant women, and invalids suffering from specified diseases are given 4 eggs for each one allocated to ordinary consumers and are supplied first. Actually there are no shell eggs for ordinary consumers since supplies are scarcely sufficient to meet priority requirements. During the past year and a half the shipment of dehydrated eggs from this country and Canada has made it possible for ordinary consumers to secure one tin of egg powder per ration period in lieu of fresh eggs.

Priority distribution is applied also to cod liver oil and to available good sources of ascorbic acid. Oranges are reserved for children under six and when imports are not sufficient for distribution throughout the country a rota system is applied—oranges, as they become available, being shipped to different sections of the country in rotation. Black currant juice and purée and rose-hip syrup are reserved for infants under two and during 1942 a concentrated orange juice prepared in this country was added to the "free or cheap" sources of vitamin C for infants. All children under two can obtain cod liver oil free and this, with one of the vitamin C concentrates, is available everywhere through local Food Offices and Maternal and Child Welfare Centers.

As with us, the cheap calories and the bulk in the British diet come from unrationed foods. Potatoes and bread jointly are the staff of life and the people are induced to eat more and more potatoes by the constant threat of bread rationing. Fish, shellfish, poultry, rabbits and game are "off the ration" and except for rabbits, are in short supply. "Offal" and the war sausages, mentioned previously, also are unrationed. There is little variety in vegetables; cabbage, Brussels sprouts, string and broad beans, peas, spinach, carrots, turnips, beets, leeks, and tomatoes are the ones usually available in season. Of these, only carrots, sprouts, and cabbage are produced in really adequate quantities. Fruit is extremely scarce at all times because of the demands of the jam ration.

### GROUP FEEDING PROJECTS

An interesting and important part of the wartime food policy is the expansion of communal feeding. It has been promoted by the Ministry of Food because it not only saves fuel and decreases waste but also saves time for workers. In addition, it increases the amount of food available for the families of those who eat out, for all meals taken in canteens and restaurants are "off the ration."

School feeding was common in large cities before the war but has been expanded greatly by the joint efforts of the Ministry of Food and the Board of Education. School meals ensure at least one good hot meal a day for the children and at the same time make it possible for many women to work in industry.

"British Restaurants" are a direct outgrowth of the war, established to provide cheap, wholesome meals for workers in small factories and people who had been bombed out of their homes. The establishment of these restaurants is at the discretion of local authorities but the Ministry of Food underwrites the enterprise and furnishes dietetic and culinary advice.

Factories which employ more than 250 people are required to provide canteens which furnish a hot meal to employees at noon and, if necessary, at midnight. Frequently, smaller plants club together in groups of three or four to maintain a common canteen.

Communal kitchens have been established in many localities to prepare food on a large scale for numerous small factories and schools within a radius of 15 to 20 miles. The only objection to the communal kitchen is that food is cooked in such quantities that it is very difficult to use methods which tend to conserve the heat-labile vitamins. Potatoes and all vegetables are cooked in steam-kettles, held in hot boxes for varying periods, then distributed in insulated containers. As a result, several hours may elapse between the cooking and the eating.

### MEALS SERVED UNDER RATIONING

Thus far I have said much about rationing and the methods used to maintain the general nutritional status of the nation, but nothing about nutrition as such. I should like to tell you first how the British people eat. In the home, meat is the chief difficulty. If the family ration coupons for the week are pooled, a "joint" can be bought on Saturday if the butcher has one and there is roast meat on Sunday, cold meat on Monday, and possibly hash on Tuesday. After that "points" meats, offal, and with the well-to-do, poultry and fish, must be depended on for the main meals for the remainder of the week. For breakfast: oatmeal; bacon or war sausages; bread and jam are the rule. For lunch: vegetable soup; a very small portion of meat or cheese; potatoes and one of the prevailing three, cabbage, sprouts or carrots; bread and margarine; and tea. For dinner there will be more soup; mince or perhaps fish; potatoes and a vegetable; pudding; and tea. Scrambled eggs made from egg powder may be served once or twice a week.

Food served in the various communal feeding places is much alike. Dinner consists of soup, a full portion of meat or fish, potatoes, one vegetable, dessert or salad, bread, margarine, and tea. The meals are good, quite as good as are found in the cheaper commercial restaurants. Schools charge 4d. or 6d. and necessitous children can get meals free. British Restaurants and works canteens charge from 10d. (18 cents) to 1s. 2d. (24 cents) per meal.

Restaurant meals are rigidly controlled. Five shillings is the maximum which can be charged for food at any meal. In any one meal no more than one main dish and one "subsidiary dish," or two subsidiary dishes and no main dish may be served. A main dish is one containing more than one-third its weight of meat, fish, poultry, game, or eggs; a subsidiary dish, less than one-third of fish or eggs. Cheese counts as a subsidiary dish as do scrambled eggs or omelette made from dried egg powder.

In ordinary restaurants breakfast is quite standardized: oatmeal, bacon or sausages, bread and jam, and tea. Lunches almost uniformly consist of soup, mince in some form, potatoes, cabbage or sprouts, and a dessert, usually pudding and, of course, bread and tea. Dinners do not differ from lunches except that cheese is often available for dessert.

In luxury restaurants where heavy cover charges are permitted cooking is better and much use is made of "off the ration" items so that really excellent meals are available. Many types of seafood and vegetables which are neither controlled nor rationed provide variety elsewhere nonexistent.

### EFFECT ON HEALTH OF THE NATION

For all practical purposes the ration has leveled the diet. The rich certainly eat less and the poor eat more of the foods which are essential to good nutrition, but for a tremendous majority of the people the diet is incredibly monotonous. There seems to have been a general slight loss of weight among the well-to-do, and in contrast to this, evidence of improvement in the nutrition of the working class. Extreme poverty is almost non-existent and food habits are good. Both the bread and potatoes which furnish the bulk of the calories are good sources of the B group of vitamins while potatoes, in the quantities consumed, are an important source of ascorbic acid. During the winter months, in fact, potatoes and vegetables of the cabbage family are almost the sole sources of vitamin C for the entire population above the age of six. Animal protein and vitamin A are not abundant. The meat ration furnishes from 18 to 20 gm. protein a day and the week's ration of butter and margarine furnishes hardly enough vitamin A for one day. Vegetable protein of good biologic value is abundant, however, and there is a fair intake of carotene. The fat content of the ration is quite low, which probably accounts for the observed weight loss among the higher income groups. In short, the British ration is ample in calories but low in animal protein and fat. Except for the B group, the average intake of vitamins is below the levels considered entirely safe; it is doubtful whether the average adult gets more than 1500 units vitamin A and 20 mg. ascorbic acid daily.

After three and a half years of this ration the people look well and seem well fed, nor are there clinical evidences of deficiency disease. My own observations were entirely clinical and were confined to groups selected because there was reason to suspect that their nutrition might be below the average. About 5000 civilians were examined in various parts of Great Britain, nearly half of these older children and adolescent workers. There were three elderly people with typical Bitot's spots but without other evidence of deficiency disease. Many women and children had mild folliculosis but no other signs or symptoms of deficiency of vitamin A. I saw one mild case of pellagra and eight women with characteristic signs of riboflavin deficiency. Thirty-five other individuals had corneal vascularization of the type which may be due to ariboflavinosis, without other signs of malnutrition. No scurvy was seen. Gingivitis was prevalent in many parts of the country, usually in association with severe dental caries. The relation of this gingivitis to low intake of ascorbic acid is still unknown. Up to the time I left, therapeutic tests with ascorbic acid had been

negative except in one hospital in Dundee where the gingivitis of a number of patients seemed definitely to be cured with vitamin C. Many children in Scotland showed evidence of old rickets. It is my feeling that with the possible exception of gingivitis, none of the findings mentioned can be related to the ration.

Where survey methods have included biochemical and physiological tests there have been some suggestive results. In Wales very low values for plasma ascorbic acid were found in the spring of 1942. These improved greatly as summer came and vegetables and some fruits were obtainable. In Wales, too, there were a few women with folliculosis who had definite lowering of vitamin A values in their blood but these individuals had no dark dysadaptation. A number of borderline plasma-protein values were observed in Wales and in Lancaster among women, but no edema. In a number of places in England and Scotland observers have noted an increase in simple hypochromic anemia of mild grade and extensive surveys of hemoglobin and red cell values are now being made.

In short, judged by my observations, a year ago, there has been no evidence of widespread malnutrition in England. There has been a lessening rather than an increase in the incidence of the common infectious diseases. Tuberculosis has increased among young women and there has been a rise in the incidence of tuberculous meningitis. While this may be related to nutrition it may also be explained by the crowding together of girls in factories and hostels and by the increased consumption of unpasteurized milk by children.

## ALLIED FOOD STRATEGY

The strategy of food is not a domestic affair. It concerns all the United Nations. It would be disastrous if the procurement of supplies became a scramble among them. It is not. There are a combined staff and a common strategy. Nothing during the last year has been more important or more significant than the establishment of the machinery of that common strategy. In June 1942, by a joint directive of the President and the Prime Minister, a Combined Food Board was established "to complete the organization needed for the most effective use of the combined resources of the United States and the United Kingdom for the prosecution of the war."

That Board has as its members the Secretary of Agriculture of the United States, and the head of the British Food Mission in Washington. It is concerned with the allocation of foodstuffs, and the world is its parish. As a pendant to the Combined Food Board, the London Food Committee was set up, and of that body I have the honor to be chairman. On the London Food Committee are represented all the Dominions—with the exception of Canada and Eire—India, and indirectly, all the Colonies and all our European Allies. The purpose of that Committee is to prepare a program of the essential needs of all the countries with which it is concerned, to relate those needs to the supplies available, and, finally, to present an agreed program to the Combined Food Board for approval and submission to their Governments.

I say that this machinery is important and significant. It is important. It prevents any competitive buying of foodstuffs that are in short supply. Further, it removes any sense of grievance on the grounds that this or that country is going short while there is a surplus somewhere else. It is significant. Already it is evident that after the war many foodstuffs will be in short supply for some time. The way to inflation is competitive buying among the nations of the world. For some time, perhaps for longer than we think, sane statesmanship will, I believe, demand the maintenance of machinery, to which Governments will, I hope, give their consent, to screen the needs of the people of the world, to be concerned with the organization of production to meet those needs, to relate those needs to the supplies available, and, finally, to procure and to allocate those supplies. For that reason I think this machinery which has come into being in the last year has a particular significance now that we are thinking of postwar problems. The grand strategy of food in wartime, if I may use the phrase without seeming pompous, has, it seems to me, its lessons for the period of disturbance that will inevitably follow the collapse of the Axis.—*William Mabane, Parliamentary Secretary to the Ministry of Food, in a speech before the House of Commons, May 13, 1943.*

## BRITISH FOOD RATIONING NEWS

To augment the restricted winter milk supplies, the Ministry of Food released a tin of household milk powder per customer from October 17–November 13, after which it will release a tin every 8 weeks till March 4. Milk shakes have disappeared from snack bars and tea shops. In order to be able to maintain the 2½ pint weekly milk ration per adult, the Ministry of Food has diverted less to the manufacture of cheese, according to a November 1943 release.

Standardization of many commodities and "zoning" of their distribution, so that cross-hauls are cut out, saves internal transport. Shipping space is saved by using milk and eggs in their dehydrated form. Dried egg enables the equivalent of shell eggs to be imported, but in one-fifth of the cargo space required for shell eggs.

Due to unexpectedly heavy returns from home growers of onions, the Ministry of Food hopes to increase the ration in industrial areas from 1 to 2 lb. per ration book. Point purchase control also applies to canned peas, tomatoes and beans.

Dehydration is being developed, especially as regards vegetables; 1000 tons of raw cabbage, occupying 140,000 cubic feet, is reduced by this process to 40 tons, occupying 15,000 cubic feet, without loss of nutritional value.

Tea, the staple drink of British working families, costing 2s.10d. (70¢) per pound, has a duty of 6d. (12¢) imposed upon it.

Five full-time qualified officers have been appointed to advise bakers on faults in the national loaf. The five chosen have been employed by the milling industry as expert bakers and demonstrators for the past 16 months, and their duties have included advising on problems of baking with national flour. The Ministry of Food points out that the appointments were not due to a falling off in the standard of the national loaf but were intended to maintain and even improve that standard.

Rationing by "points" applies to all dried and canned fruit. There are no bananas, lemons, or imported fruits at all except a few oranges for children. There is no ice cream in Britain, and adults are on small rations of sweets and chocolate. The Ministry of Food will control cinnamon, mace and nutmeg, requiring those holding stocks to make a return to the Ministry. Processing or selling except under license is prohibited.—*From a release by British Information Service, 360 N. Michigan Avenue, Chicago, November 1, 1943.*

# USE AND CONSERVATION OF OUR HOME FOOD SUPPLIES[1]

JESSIE W. HARRIS

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SOME time ago Secretary Wickard phrased his vision of the vital place of food in this war in his epic statement: "Food will win the war and write the peace." Although most of us at that time believed food important in our struggle for victory, few of us realized how important it was or how much its significance depended upon us. One thing we Americans like about our democratic way of life is the element of choice it gives to every citizen. Even in wartime we have a choice in regard to food and the part it is to play in the war. As civilians we can so choose that our everyday foods can be our weapon for helping to win the war and the peace, or by our own choice we can lengthen the war and endanger the peace, for it has also been aptly said that hunger can lose the war and wreck the peace.

Which shall it be? This is the choice that every citizen in America faces today. Do we want a short or a long war? Do we want a lasting peace or just an armistice? Shall we have hunger and hate breeding revolution such as that written on the pages of history in the French Revolution, or shall we have peace and good will?

Ours is a choice that must be made known by action, not words, which must speak louder than words to be heard above the cannonade of war. It must give us cause for concern to realize that what we do about food from day to day can (1) shorten or lengthen the war, for in war "time is ticked off in dead and wounded"; (2) lengthen or shorten the peace, for freedom from want will be the major factor in avoiding future wars; and (3) increase or decrease the cost of the war for us and for those who come after us.

We must make the right choice. On those of us who have the privilege of attending such meetings as this, and who have scientific and practical knowledge of food, rests the responsibility for mobilizing the civilian population in this great battle in which, together with our military might, food also fights for freedom.

Our grand strategy, first, is to raise all the food that we can and, second, to make every bit of this food do its maximum job at home, on the battle front, and in the lands of our allies and the territories which our armed forces win from the oppressors. To complete the liberation of enslaved peoples, we must rid them both of their oppressors and of the want to which they have been subjected. Thus, every victory means a need for more food.

## THE FOOD SUPPLY PROBLEM

Although 1943 marks the seventh "fat" year as far as food produced by American farmers is concerned, there is still not enough to meet all demands. Food, therefore, must be carefully allocated. Our supply of food has increased rapidly but the demand has increased still more rapidly, for food will help win the war only if we share it with our fighting allies and help feed the peoples of Europe as they are liberated from the Axis. Without any altruistic motives our selfish interest would dictate this policy. We must first, of course, adequately feed our own civilian and military populations. This calls for careful planning on the part of the Government, and decisive action and the cooperation of 130 million Americans in carrying out the plans.

Farmers have done a tremendous job of food production for the past 7 years. In 1943 they produced 31 per cent more food than the 5-year average before the war but for 1944 plans have been made for a 5 per cent increase over 1943. This goal is set in spite of manpower shortages which add greatly to the farmer's problems in achieving his goal.

The scientific plans for production are made in terms of meeting human needs. The Government, through support prices, loans, subsidies, and persuasion, is using its resources to secure maximum production of the most necessary foods. But for the duration of the war and for the years immediately following there will not be enough of many critical foods to meet all demands; hence, as previously stated, we must very carefully plan how our food supplies are to be allocated.

The percentage allocation advanced by the Government for the immediate future is: 75 per cent of our food supply for civilians in the United States; 13 per cent for our armed forces; 10 per cent for lend-lease; 2 per cent for our territories and special needs.

## FOOD WASTE

Since demand exceeds supply, it is urgent that we achieve more thrifty utilization of our food supply. The prevention of waste offers civilians the greatest opportunity to make additional foods available. Since the farm population is being asked to increase production, it is appropriate that the civilian population also help increase the available food. If we reduced by one-third the amount of food wasted in the country as a whole, the saving as a result would be equivalent to a 6 to 8 per cent increase in our total food supply, for it is estimated that 20 to 30 per cent of the food produced in the United States every year is wasted. Some of this waste is unavoidable, but a great deal is not. The members of the American Dietetic Association may well assume, as a major responsibility, that of pointing the way to the minimizing of waste. We have not yet fully realized how war reduces our food supply.

"Clean plates" must become our practice. In one school a committee was appointed to study food waste in the lunchroom. To their amazement the committee found that the waste in one week was enough to feed a family of 6 for that length of time. Needless to say, they did something about it. They began where every individual, every family, and every institution should begin—with a study of their own problems of food use and conservation. Much food has been added to our 1943–44 winter supply through home and community food preservation programs. These must be expanded in 1944 so that no food is wasted and as a further step in providing an adequate diet.

Another way in which we can prevent waste is by cooperating with the Government when it designates a food as a "Victory Food Selection," indicating to the citizens, "Here is a food that is abundant now; so that none of it will go to waste, use it freely but use it wisely." When marketing, storage, and processing facilities are overtaxed in handling an abundance of food, then by means of declaring a Victory Food Selection, the Government makes an extra effort to move the crop from the farm to the table without waste. The success of such programs depends upon the cooperation of producers, handlers, and consumers.

Irish potatoes were announced as a Victory Food Selection all over the United States for October 21 to November 6. This meant that potatoes were in abundance and that the crop exceeded commercial storage facilities. As a matter of fact, the excess was 50 million bushels. Citizens

[1] Presented at an open meeting of the American Dietetic Association, Carnegie Music Hall, Pittsburgh, October 20, 1943.

were asked to help use this surplus to the fullest extent during its peak or to store as much as could be held in the home without spoilage.

Other abundances will be announced as Victory Food Selections from time to time, more likely on an area basis since there are few nation-wide food abundances. Additional community effort will also be needed to see that all local surpluses are wisely used. Let us join in all such efforts to prevent waste of food. The farmers have done their part in raising the food. The 1943 crop is now in our hands; use it wisely, and help others to do so.

### HOW FAR WILL OUR FOOD GO IN MEETING OUR WANTS AND NEEDS?

We have as much food for civilian use now as we had from 1930–36, and we have 4 per cent fewer civilians, for a large number are now in the armed forces.

Few realize that food for most people, through the years, has been rationed by their pocket-books. In the period before the war, there was a great need for food by certain groups of people, as shown by the figures on malnutrition in America, but there was a shortage of purchasing power. You will recall that for those who had dire need of food due to lack of purchasing power, the Stamp Plan was used as a means of distributing food.

War has changed this situation by replenishing empty pocket-books. Three dollars have taken the place of each dollar formerly in the American pocket-book, and it is widely distributed, much of it in pocket-books hitherto empty. At the same time, automobiles, refrigerators, shoes, gasoline, houses, and other things for which Americans spend money have become scarce or have disappeared from the market.

Much of this huge increase in purchasing power has been turned to food as an outlet. This situation, together with other heavy demands for food, has made it necessary to ration certain foods in order to assure equitable distribution of the civilian allocation. Our individual food purchasing was formerly on the basis of what we wanted and what we had money to buy—now food must be rationed on the basis of nutritional needs, in terms of foods available.

In the years 1935–39, many people did not have the money to eat what they wanted. In 1941, the financial situation was much more favorable. A per capita comparison of the retail food supply in the period 1935–39 with the year 1941 (Table 1) reveals the Americans' choice of foods when more of them could have what they preferred.

Table 1 shows that when both food and money are plentiful the "people's choice" is a greater amount of food as a whole, and a great deal more of certain food items. In 1941, for instance, their choice as indicated by increased demand for specific foods, in contrast to 1935–39, was in the following order: Specific foods for which the demand was *substantially increased* (on a percentage basis) included citrus fruits and tomatoes, 15 per cent more; milk (and milk products in terms of fluid milk equivalent), 8 per cent; meat, fish, poultry, 10 per cent; fats and oils (including bacon, salt pork, and butter), 9 per cent; and sweets (sugar, syrup, preserves), 8 per cent.

Specific foods for which the demand was *moderately increased* were: eggs, 6 per cent more; leafy, green, and yellow vegetables, 4 per cent; other vegetables and fruits, cereals and breadstuffs, 3 per cent.

Those showing *no increased* demand were dried beans, peas, and nuts.

A 6 per cent *decrease* in demand for potatoes was indicated.

In the light of the foregoing, let us see what civilians will have available in 1944, according to present estimates (Table 2). "Coming events cast their shadows before"—you can check these estimates against 1943 supplies, from your knowledge of foods available in 1943, and see how far we are on our way. All figures are retail weights per capita per year for the civilian population.

TABLE 1

*Foods selected when both food and money were relatively plentiful (per capita food supply, retail basis)**

| FOOD GROUP | 1935-39 | 1941 | INCREASE OR DECREASE |
|---|---|---|---|
| | | | % |
| Milk (and milk products in terms of fluid milk equivalent) | 449 lb. (209 qt.) | 484 lb. (225 qt.) | +8 |
| Potatoes (sweet and white) | 140 lb. | 132 lb. | −6 |
| Dried beans, peas, peanuts | 16 lb. | 16 lb. | |
| Citrus fruits and tomatoes | 78 lb. | 90 lb. | +15 |
| Leafy, green, and yellow vegetables | 95 lb. | 99 lb. | +4 |
| Other vegetables and fruits | 214 lb. | 220 lb. | +3 |
| Eggs | 36 lb. | 38 lb. | +6 |
| Meat, fish, poultry | 136 lb. | 150 lb. | +10 |
| Cereals and breadstuffs (including flour) | 199 lb. | 204 lb. | +3 |
| Fats and oils (including bacon, salt pork, and butter) | 65 lb. | 71 lb. | +9 |
| Sugar, syrup, preserves | 106 lb. | 115 lb. | +8 |

* The figures herein are based on information from the Civilian Food Requirements Branch, Food Distribution Administration as of Nov. 1943. A percentage increase is indicated by a plus sign; a decrease, by a minus sign. This note applies to tables 1 and 2

TABLE 2

*Estimated per capita civilian food supply for 1944, compared with amounts available in 1943 and that purchased by civilians in 1941*

| FOOD GROUP | 1941 | 1943 | 1944 | INCREASE OR DECREASE (1944 vs. 1941) |
|---|---|---|---|---|
| | | | | % |
| Milk (and milk products in terms of fluid milk equivalent) | 484 lb. (225 qt.) | 517 lb. (246 qt.) | 515 lb. (240 qt.) | +6 |
| Potatoes (sweet and white) | 132 lb. | 150 lb. | 157 lb. | +19 |
| Dried beans, peas, and nuts (including soya products) | 16 lb. | 20 lb. | 22 lb. | +38 |
| Citrus fruits and tomatoes | 90 lb. | 93 lb. | 104 lb. | +16 |
| Leafy, green, and yellow vegetables | 99 lb. | 99 lb. | 109 lb. | +10 |
| Other vegetables and fruits | 220 lb. | 177 lb. | 204 lb. | −7 |
| Eggs | 38 lb. (25 doz.) | 41 lb. (27 doz.) | 41 lb. | +8 |
| Meat, fish, poultry | 150 lb. | 146 lb. | 149 lb. | −1 |
| Cereals and breadstuffs (including flour) | 204 lb. | 208 lb. | 211 lb. | +3 |
| Fats and oils (including bacon, salt pork, and butter) | 71 lb. | 67 lb. | 65 lb. | −8 |
| Sugar, syrup, preserves | 115 lb. | 90 lb. | 96 lb. | −17 |

In making predictions about the 1944 food supply it should be emphasized that all estimates are necessarily tentative. Gazing into this crystal ball involves the unpredictable factors of weather, war, and human beings. It is obvious that many things will operate to change the amount when the final reckoning comes. It might be

asked why give figures so far in advance of actual results? This has been done so that you might know that the WFA is looking out for the 1944 diet; in fact, it is already thinking in terms of 1945 supply. There is definite purpose in their planning, shaped always by nutritional principles. In order to accomplish a task as stupendous as keeping the food supply adequate for civilians and all other claimants, matters cannot be left entirely to chance. There must be planning for the future and by informing you well in advance concerning these plans we hope to be able to count on you to help, where needed, to further them. For example, the plans call for changes in food habits, and Americans need help in doing that. Americans do not need to change their food preferences but they will gladly change their food practices in order to have a real part in winning the war and establishing an enduring peace.

The probable supply of food available for the next year, if present goals are achieved, means, for the most part, less of the food that our taste dictates and more of the foods we did not use so abundantly when we had free choice, but it also means plenty of food for good nutrition. Table 2 shows that we will have (on a percentage basis) *much more* than in 1941 of: legumes, including soya products, 38 per cent more; tomatoes and citrus fruits, 16 per cent; potatoes, 19 per cent; leafy, green, and yellow vegetables, 10 per cent.

We will have *moderately increased* amounts of eggs, 8 per cent; milk (and milk products in terms of fluid milk equivalent), 6 per cent; flour and cereals, 3 per cent; *about the same* amount of meat, fish, poultry, minus 1 per cent; *moderately less* of certain vegetables and fruits, minus 7 per cent; fats and oils, minus 8 per cent; and *much less* than in 1941 of sugars and syrups, minus 17 per cent.

We know that the foods of which we will have more (dried beans, including soybeans, potatoes, and cereals) are nutritionally good foods and that if these are properly distributed and judiciously used they will supplement the small amounts of other foods and enable us to have a nutritionally adequate diet. It is a challenge to us to help our fellow Americans to have interesting, palatable, adequate meals from these available foods.

Necessity is the mother of invention—Mexicans have shown ingenuity in developing many tasty dishes made of corn and beans. The Chinese for centuries have been past masters of dishes compounded of a little meat and generous amounts of vegetables and cereals. American ingenuity, where food is concerned, has been chiefly displayed in making two blades of grass grow where one grew before, or in processing food not only to increase variety but reduce the time of home preparation. At present and during the period immediately ahead, those who have knowledge of food and nutrition must use their inventive genius in teaching Americans how to be well nourished with the foods that are available and how to make these foods acceptable.

### WILL WE BE ADEQUATELY FED IN THE YEARS JUST AHEAD?

The Civilian Food Requirements Branch of FDA states: "The figures for 1943 indicate that if the food supply is equitably distributed and if waste is minimized, there is assurance that civilians will be able to obtain enough food to meet all their nutritional requirements." The immediate problem in obtaining adequate nutritional status of the civilian population in wartime, therefore, is to get the foods to the consumer on an equitable basis, and then to be sure that all food is used wisely and completely. As the food picture changes, the plan of rationing and other measures of distribution of food must constantly be examined to see if they meet the requirements of equitable distribution.

The situation may call for expanding school lunch facilities and also for a widely expanded program of in-plant feeding in industry. England has solved the problem of food distribution in wartime by communal restaurants and by a universal school feeding program. This problem obviously needs study here since families with no small children and who do not raise their own food nor eat in public eating places do not at present get a full quota of rationed meats and fats. On the other hand, those who do eat in restaurants or lunchrooms and also use their full quotas of ration points are depriving others of a fair share of these foods because they are "eating their meat and having it too." Giving coupons to others is not only illegal, but it serves to short-change others entitled to their full share of food distribution. The black market is another way in which some civilians are short-changed in the matter of rationed foods. People, in general, do not understand how these practices operate to prevent an equitable sharing of rationed foods. The patriotic American public needs help in understanding its full responsibility in sharing food. Our own responsibility here is clear.

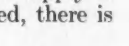
The long-time job ahead remains one of nutrition education. In 1940 when the nutrition problem was presented to the people of this country as one of major national importance, four reasons were advanced in explanation of the existence of malnutrition in the United States:

1. Many people did not know enough about nutrition.
2. Some people did not care enough about nutrition.
3. Some people had land but did not raise enough of the right kind of food.
4. Some people did not have enough money or land to provide the necessary food.

War has materially changed this picture but these are all potent factors today. The major task is still one of education. One of the first laws of education is that people learn best when motivated by interest. The interest in food and in the importance of good nutrition is at a new high. Let us adjust nutrition teaching to the changing pattern of food supplies and help American families achieve their war production goals through improving their nutritional status, for the amount of work one can do is definitely related to nutritional well-being.

There are many barriers but none are insurmountable. Let us act in the spirit of Admiral Farragut who, when torpedoes presented a barrier to the first American Navy of wooden ships, ignored the torpedoes and gave the command to his fleet "Full steam ahead."

The American Dietetic Association is the group that can and should lead the attack as Food Fights for Freedom.



***Measuring Food Waste.*** At Mitchel Field food waste is a fighting phrase. . . . An officer measures the food waste for each mess hall with a gage that counts off the garbage inches, gallons, and pounds. One unit on the gage represents 3.25 in., 3 gal., or 24.75 lb. of food in a 30-gal. garbage pail. Four ounces per man per day of edible garbage is the top allowance. The aim is well under that figure. Counted in the 4-oz. figure is food that could have been eaten—but not peelings, rinds, coffee grounds, eggshells, and the like, which are segregated in separate pails.—*Consumers' Guide, November 1943.*

# AVAILABILITY OF DAIRY PRODUCTS IN THE COMING MONTHS[1]

MILTON HULT

*President, National Dairy Council, Chicago*

IT IS proper that the members of the American Dietetic Association should be concerned with the availability of dairy products during the months ahead. I wish to commend the farsightedness and resourcefulness that prompted this session. By your interest in this most pressing question, you are demonstrating a concern for one of the most vital problems confronting America. I appreciate the opportunity to participate in this program.

Basic to a consideration of the availability of any food are facts with respect to the production of that food. The production of milk on farms during the war must depend on two factors: first, the number of dairy cows on farms; second, the output of milk per cow. The number of dairy cows in the United States has been increasing steadily for a number of years. At the beginning of 1940, there were 24,926,000 dairy cows and heifers two years old and over. This had increased to 25,478,000 in 1941 and to 26,398,000 in 1942. It is estimated that on January 1, 1943, the number of dairy cows and heifers two years old totaled more than 27 million, the largest number ever raised on the farms of the United States.

There remains the second factor—the output of milk per cow. It is estimated that in the year 1940–41, the output of milk per cow increased 2.5 per cent, resulting in the highest yield per cow in the history of the dairy industry in this country. This yield was maintained in 1942.

## CURRENT MILK PRODUCTION

Despite these striking figures, and despite the pressing need for milk and milk products for civilians, the armed forces, lend-lease commitments, and foreign rehabilitation, the total milk production in the United States at present is declining at a dangerous rate. Total milk production for 1943 is estimated at about 118 billion pounds as contrasted with the record production of approximately 120 billion pounds in 1942; and the estimate for total milk production in 1944 is set at only 115 billion pounds. This contrasts sharply with the goal of 122 billion pounds of milk which was established for 1943 and again has been established as the goal for 1944. It contrasts even more sharply with the milk *requirements* for the year, which total 140 billion pounds.

I should like to call your attention to another phase of this milk production problem in which I believe you will be interested. Of all the livestock on the farms of our land, dairy cows make the most efficient utilization of feeds. They return much more human food per pound of grain fed than any other farm animal. Furthermore, they utilize pasture and roughages most effectively, converting feed that would be unfit for human consumption into the best of protective foods, rich in fat, animal protein, vitamins, and minerals.

The obvious way to provide enough milk and dairy products for all uses is to produce more milk. The present decline in milk production is due to a number of reasons. Among these are the critical shortage and high cost of feed; a government-controlled price relationship between dairy products, livestock, and feed that places the dairy farmer at a disadvantage as compared with other food producers; labor shortage caused by demands of the armed forces upon the manpower of dairy farms and the highly-paid jobs offered in war plants; the high cost of such labor as is available, as well as for machinery and supplies used by dairy farmers. Another factor which has recently become important is the very favorable price paid by butchers and packers for dairy cows as meat. These and other reasons are prompting dairy farmers to reduce the size of their dairy herds—or to quit dairying.

I have dwelt on the *production* of milk because it is basic to any consideration of the question of available supply of milk and milk products. Essential to the consideration of utilization of the available supply must be an appreciation of the fact that this available supply is declining. Unless something drastic and radical is done to bring about increased production of milk, a severe shortage with calamitous results will ensue. Such is the pessimistic picture I must leave with you of the near-future of milk production.

## DISTRIBUTION OF AVAILABLE SUPPLIES

Chart 1 indicates the distribution of all the milk that is produced in the United States and made available for human consumption. (The source for the information presented in charts 1–5 incl. is the Bureau of Agricultural Economics, USDA.) The dairy industry, as you know, is made up of a number of branch industries. As you will note from this chart, based on figures for 1943, the fluid milk and cream branch utilizes 45 per cent of all the milk produced and shipped from the farms; 36 per cent of total milk production goes to the butter industry; 8 per cent to the cheese industry; 7 per cent to the concentrated milk industry to be manufactured into evaporated, condensed and dry whole milk; and approximately 4 per cent to the ice cream industry.

In the fiscal year 1943–44, 78 per cent of our butter will be made available to civilians and 22 per cent is to be purchased by the Government (Chart 2), 15 per cent of which will be made available to our armed forces, 6 per cent to our allies through lend-lease commitments, while one per cent is earmarked for "special needs," including foreign rehabilitation as well as reserve stocks held by the Government.

The butter industry on November 20, 1942 was ordered to set aside for Government use one-half of the total inventory of butter in storage in 35 principal markets. Thereafter, manufacturers of creamery butter were required to set aside proportions varying from a low of 30 per cent to a high of 50 per cent in the months of May, June, and July. Commencing October 1, 1943, the Government cancelled its set aside orders until further notice. This change in policy was dictated by the fact that the Government had 232,435,000 lb. butter in storage on October 1. You may be interested in the fact that on October 1, 1942 there was in storage in this country only 123,599,000 lb., and that the average cold storage holding of butter for the five-year period 1938–43 was only 163,988,000 lb.

Chart 3 illustrates the allocation of cheese, as announced in July 1943, for the fiscal year 1943–44. You will note that 55 per cent of the total cheese manufactured will be made available to U. S. civilians, 11 per cent to our armed forces, 19 per cent for lend-lease, and 15 per cent for special needs. The total set aside for this last-mentioned purpose, in pounds of cheese, is tremendous. In allocating this amount of cheese for special needs, consideration is given to possible increased demands by our British allies.

There is no way to predict accurately the total amount of cheese that will be made in a given year. At present, the Government is buying 50 per cent of all cheese manufactured, which is less than the 70 and 60 per cent purchased early in 1943.

[1] Presented before the American Dietetic Association, Pittsburgh, October 21, 1943.

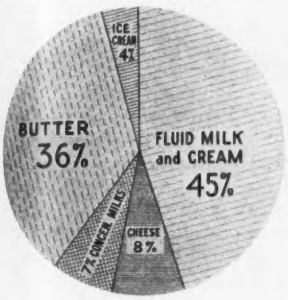



CHART 1. Production and distribution of all milk, 1943

CHART 2. Allocation of butter, fiscal year 1943–44

CHART 3. Allocation of cheese, fiscal year 1943–44

CHART 4. Allocation of milk solids for ice cream

CHART 5. Allocation of evaporated and condensed milks, dry whole milk, and dry skim milk, fiscal year 1943-44

The ice cream industry in recent years has shown a phenomenal increase in total gallons manufactured and ice cream is becoming increasingly important as a dairy food. As evidence, the annual production of manufactured ice cream has grown in 30 years from 120,000,000 to approximately 1,600,000,000 qt.—more than thirteenfold. Laboratory research on flavor, texture, and sanitary control; progress in methods of refrigeration; freezer inventions; improvements in distribution; and increasing recognition of the nutritive value of ice cream as a food have all been important factors in this remarkable increase.

Despite this increase, not more than 4 per cent of the total milk produced in the country is allocated to the ice cream industry. The total milk solids made available to the ice cream industry are limited by the Government to 65 per cent of the amount used in the base period, December 1, 1941 through November 30, 1942 (Chart 4). From the balance, the military needs for ice cream are supplied and the remainder is diverted to the other branches of the dairy industry for manufacture of other dairy products.

Chart 5 depicts the allocation of concentrated milks. The present rate of manufacture of evaporated and condensed milks will make available large quantities of each product. Eighty million cases of evaporated milk were manufactured in 1942, which marked an all-time high. Although the OPA allocated enough tin during 1943 to make it possible to can an amount of evaporated milk equivalent to 95 per cent of this all-time record, it is likely that the final supply available for the year will be around 70 million cases. Taking into account the storage holdings and grocery trade stock, together with the vast holdings of the Government, which represent a well-protected supply, there should be no concern with respect to the available supply of evaporated milk.

The manufacture of dry whole milk is proceeding at a phenomenal rate. This year's total production of this valuable dairy product will probably nearly double that produced last year, or between 125 and 150 million pounds. This sharp increase in manufacture is due to the fact that at present there are no restrictions or limitations upon the manufacture or use of this product nor Government-controlled price ceilings.

A strikingly different picture exists with respect to the dry defatted milk. During the first 8 months of 1943 the total amount of non-fat milk solids manufactured was 20 per cent less than that manufactured during the same period of 1942. Of all the dry non-fat milk solids manufactured by both the spray and roller processes, the Government is taking 75 per cent, leaving 25 per cent for civilian use.

With a prospect of limited supplies of the highest quality human foods, all possible sources should be utilized. Approximately 35 billion pounds of skim milk is fed to farm animals annually. This is sufficient to make possible the production of about 3 billion pounds of dry defatted milk solids containing highest quality proteins, as well as calcium and important vitamins, so essential to human nutrition.

While some of this potential supply is needed on the farms, the proportion is small indeed compared with the vast total. Procurement for human food usage of only 25 per cent of this total is a reasonable goal to be sought immediately through an adequate price incentive. Such an amount of non-fat milk solids (750 million pounds) would more than double the current volume of both spray and process production. This additional supply would not only meet all Government needs, but would provide a greater amount for civilians and improve immeasurably the availability of milk and all milk products.

The consumption of fresh fluid milk has witnessed a

sharp increase during the past several years. During the period 1936–40, an average of 33 billion pounds of milk was consumed in the form of milk and cream. In 1942 this increased to 38 billion pounds, and for 1943 it was estimated that 41 billion pounds of milk and cream of the total milk produced would be consumed as fresh fluid milk and cream.

This increase is the result of greater understanding and appreciation of the food value of milk, increased purchasing power, and lack of rationing or limitation upon the sale and consumption of fresh fluid milk. I know that members of the American Dietetic Association will agree with me that this increase is consistent with the best nutritional teachings, especially when studies show that the greater part of this increased consumption has been among the middle and low-income groups.

The increased demand for fresh fluid milk, from an average of 33 billion pounds for the period 1936–40, to 38 billion pounds in 1942 and 41 billion pounds in 1943 has resulted in diversion of milk from rural areas where it would normally go into manufactured dairy products, to the urban milk sheds where the milk has been made available as fresh fluid milk and cream. While this situation is far from undesirable from a nutritional standpoint, the consumption of fresh fluid milk has been rising about 1 per cent a month for some time and now is about 20 per cent above the 1941 level and between 10 and 12 per cent over the 1942 level. It can be readily appreciated that with decreasing production this rate of increasing consumption might proceed until the manufacture of dairy products for military, lend-lease, and special needs might have to be seriously curtailed.

To avoid continuance of this situation, the Government on October 1943 authorized a milk conservation program. The distribution of fresh fluid milk, cream, buttermilk, chocolate milk, and cottage cheese is now controlled in some 50 or more principal cities of the United States by WFA. Extension of the order until it shall apply to every city with a population of more than 50,000 is expected before the end of the calendar year.

### THE MILK CONSERVATION PROGRAM

This program of milk conservation begins with the Government controlling the distribution of fresh milk through the milk distributor. Through a system of dealer quotas, each milk distributor is allowed to sell each month exactly 100 per cent of the amount of fresh fluid milk sold in June 1943, but only 75 per cent of the amount of fresh fluid cream, buttermilk, chocolate milk, and cottage cheese sold in June 1943. While, theoretically, this order means that each consumer is entitled to the amount of milk he purchased during June 1943, in practice this may not work out.

This may be due to the fact that demands for the products of the milk distributor are higher than they were in June. Then, too, the milk distributor must allocate his fixed quota of milk and milk products, which is based on his June 1943 sales, to meet a demand that will fluctuate over future months. For example, should a milk distributor be called upon to serve new residents in his city, he must serve them from his fixed quota, which in June did not include the requirements of the new residents. Furnishing milk to the schools offers another example. In most parts of the country, schools were in session only a short time during June 1943. Only the actual amount of milk sold to the schools in June can figure in the establishment of the total quota allowed the milk distributor. Assuming that the schools will want milk throughout the school year, rather than the several weeks comparable to the school session of June 1943, you can readily see that in order to meet such demands the milk distributor will have to limit the consumption of milk by other consumers. Many problems of quota allocation confront each milk distributor every day and I bespeak for him your sympathetic understanding and wholehearted cooperation.

Of all the milk allocated for use as whole milk in some form, 97 per cent will be available to U. S. consumers and only 3 per cent exported as concentrated milks.

Members of the American Dietetic Association can contribute greatly to the war effort by helping to make the Government milk conservation program a success. In reality it is a voluntary sharing plan, an effort to distribute the available supply of milk in all its forms to the greatest number of people. You can contribute markedly to the success of this latest Government program, which affects so sharply the wartime National Nutrition Program, by clearly understanding its operation, by cooperating in full measure with its objectives, and by explaining and interpreting it to all those with whom you come in contact. You can also help by making clear to all those for whom you are directly responsible and to consumers wherever you come in contact with them, ways and means of conserving dairy products so that none are wasted. Dairy products are precious.

You can contribute further by helping to make clear the wisest, most efficient, and most effective use of milk and milk products. Even when recommended standards for milk consumption cannot be attained because of shortages, every effort should be made to maintain the present recognition of the importance of milk and milk products in the National Nutrition Program. The rightful and vital place of dairy products in good food habits, established by nutritionists and health authorities during these many years, must be held and even strengthened, regardless of any temporary shortage in the milk supply. To do otherwise is to permit false nutrition beliefs to spread throughout the land, and to lose the value of gains made in nutrition education over the past quarter of a century.

In short, the impetus for improved food habits has been accelerated during the past several years, and we must exert every effort to keep the program in force. Constructive nutrition programs must therefore continue, regardless of food shortages and the need for temporary privation. The public must be told regularly that dairy products are vital foods even though there is a temporary scarcity. Only by operating on such a plan can we hope for a nation of people that will be better fed in the future than statistics would indicate them to be at present.

***Food Goals for 1944.*** In a series of recent state meetings, state farm leaders set goals for food production in 1944 which, if fully realized, would result in a total food output 38 to 40 per cent above the prewar average and 4 to 6 per cent above the record output in 1943 provided yields are about average. The goals recommend some increases in total milk and egg output, a slight decrease in chickens and turkeys raised, and a sufficient volume of livestock slaughter to increase by 8 to 10 per cent total meat production. The combined output of poultry, dairy, and meat products would be 4 to 6 per cent larger than the all-time high reached in 1943 and over 40 per cent above the average in 1935–39.—*The National Food Situation, Bureau of Agricultural Economics, USDA, November 1943.*

# WAR AND OUR MEAT SUPPLY[1]

WESLEY HARDENBERGH

*President, American Meat Institute, Chicago*

THOSE of you who have found it difficult at times to get the kind and quantity of meat you want may be interested in knowing what the meat situation is, how it developed, and what the meat industry is trying to do about it.

The present situation is somewhat paradoxical in that, with the largest supply of meat on record, there doesn't seem to be enough to fill all demands.

## THE SUPPLY OF MEAT

Even though the production of meat this year (1943) will be the largest in our history, it is expected to be even larger in 1944.

This year, the production of meat in the United States, according to official estimates, will exceed the huge total of 24 billion pounds, representing an output of more than 22 tons of meat for every minute of the year. Production in 1943 will be about 13 per cent larger than in 1942.

In 1944, the production of meat is expected to approximate 25¾ billion pounds—about 7 per cent larger than in 1943, and almost half again as large as the average annual production for the 10 years from 1933 to 1942, inclusive.

The beef supply in 1944 will be about 10 per cent larger than in 1943; pork, about 6 per cent larger; veal, about 9 per cent larger; lamb, about 14 per cent smaller.

In 1944, pork is expected to represent about 54 per cent of the aggregate supply of meat; beef, about 37 per cent; veal, about 5 per cent; lamb, about 4 per cent.

Purchases by the federal agencies in 1944 are expected to represent about 41 per cent of the pork supply; about 25 per cent of the beef supply; about 21 per cent of the veal supply, and about 16 per cent of the lamb supply.

These purchases, plus exports and a contingency reserve, are expected to total 8½ billion pounds, leaving 17 billion pounds for domestic civilian use.

Of the 24 billion pounds produced this year, approximately 2 out of every 3 lb.—more accurately 63 out of every 100—will be available for civilian use. The same approximate proportions should hold good for 1944.

Consumption per capita for 1943 is estimated at 132 lb.; that for 1944 at 135 lb. or about 7 per cent above average per capita consumption for 1935–39.

It probably should be mentioned that these estimates are based on dressed weight; that is, the weight at the packinghouse, and not all of this amount can be obtained by housewives with their meat ration stamps. In the first place, there is a substantial shrinkage in product from the time the animals are dressed until the meats are processed and cut into steaks, roasts, chops, and other cuts desired by the housewife. In the second place, a large proportion of this quantity is obtained from farm-dressed animals and some of it does not pass through retail meat stores. A significant proportion of the total also is purchased by hotels, restaurants, clubs, and other eating places. It is obvious, therefore, that the total amount of meat being sold through retail meat stores is substantially less than the indicated amount of dressed weight of meat product available for the domestic civilian population.

In terms of the types of meat available, it is probable that there will be substantially more pork and proportionately less beef and lamb available for civilian consumption in the first half of 1944 than in the first half of 1943, while during the latter half of 1944 civilians can expect somewhat larger proportions of beef.

With the quantity of meat available for civilian use not greatly different from what consumers have been accustomed to, one wonders why it has been so hard at times to get meat. One reason is that when supplies of livestock coming to market have been small, governmental requirements have been unavoidably large. Neither marketings of livestock nor the demands of our armed forces are controllable. An Army must be fed, of course, and meat must be available when it is needed, regardless of any other conditions. The meat packing industry, moreover, is able to process meat animals only after the farmers have them ready and send them into the market.

Still another reason for the scarcity of meat is that, with purchasing power at very high levels, everybody has wanted meat and plenty of it. The demand from consumers has been the strongest the meat industry has ever experienced. This tremendous demand from consumers, coupled with large military and lend-lease requirements, has put a pressure on the meat industry unprecedented in history. Add to this the complicating influences of OPA regulations, black markets, and other factors and it will be apparent that the people in the meat industry have had a turbulent year.

More people are eating close to the average per capita consumption of meat than was true a few years ago—or even more than the average when they can get it.

In an effort to improve the unsatisfactory situation of the industry, and to find a method that would assure supplies for the Army and lend-lease, and at the same time permit to the fullest extent possible the normal functioning of the meat industry under the law of supply and demand, the American Meat Institute undertook last February a comprehensive study of the whole meat situation. More than 200 representatives of member companies, constituting more than 20 committees, took part. An intensive study was made covering several weeks' time, in which committeemen worked frequently until late at night and on Sundays and holidays. They conferred at length with the producers of livestock and retailers of meat, who likewise had been studying similar problems. Out of this study a meat management program was evolved, which took the form of a proposal that there should be a balancing of demand against available supplies so as to remove some of the pressure which had developed as a result of the Government's effort to control prices. Specifically, it was proposed that there must be coordinated control over the three categories into which the demand for American meat may be divided: armed forces, lend-lease, and civilians, so that demand will not at any time exceed the supply. An effective consumer rationing program is an essential part of the plan.

The Government, as you know, established a War Meat Board several months ago to put meat management principles into effect. It includes representatives of WFA, war agencies having to do with the purchase of meat for the armed forces and lend-lease, Price and Rationing Divisions of OPA, as well as representatives of the meat business. It has functioned seriously and sincerely and accomplished much good, but, in the opinion of some, has not been able to live up to its possibilities, not because of any shortcoming of its own, but because of an apparent reluctance on the part of the Government to clothe it with full authority.

## FISH AND POULTRY PRODUCTION

Poultry production for 1943 is expected to be of record size. Chicken production is now officially estimated as approaching the goal of 4 billion pounds, or 34 per cent

[1] Presented before the American Dietetic Association, Pittsburgh, October 21, 1943. Revised as of November 3.

above 1942 and 72 per cent above the average for 1935–39. Supplies of chicken for civilian consumption in 1943 are expected to be about 29 lb. per capita or 32 per cent larger than in 1942 and 61 per cent above the 1935–39 average. The production of turkeys probably will be about the same as in 1942 but about 43 per cent above the 1935–39 average. Civilian turkey consumption per capita in 1943 is estimated to be approximately 3.5 lb. or about 8 per cent less than in 1942 but still 30 per cent larger than the 1935–39 average.

Supplies of fresh and frozen fish available for civilian consumption in 1943 are estimated to be approximately 4½ lb. per capita or 20 per cent less than in 1942 and 30 per cent less than the 1935–39 average. Furthermore, since lend-lease and the armed forces are taking large quantities of canned fish, supplies of canned fish for civilian consumption are expected to be only 2½ lb. per capita or 22 per cent less than a year ago and only about one-half of the 1935–39 average.

### IMPORTANCE OF MEAT PRODUCTION

There has been much discussion during recent months of the advisability of reducing meat production on the theory that part of the grain used for feeding livestock might be used more advantageously for human food. It may be worth while to consider this proposal from various aspects.

In the first place, the production and consumption of meat have a significance which extends far beyond the livestock and meat industry. Livestock consume a large part of the grain, hay, and other roughage produced on the farms, transforming into nutritious human food much material which otherwise would be wasted. At the same time the soil is actually enriched by livestock.

As the USDA has often pointed out, this function constitutes not only one of the fundamentals of economical meat production, but forms the basis of any permanent system of agriculture. Without great herds of livestock, a substantial part of the plant products grown each year would be wasted, and soil fertility would be seriously impaired.

The importance to the nation of this side of livestock production has been pointed out graphically by Dr. John R. Mohler, former Chief of the Bureau of Animal Industry, USDA.

> One may ask why it is necessary or even desirable to have a large animal population in a country such as this, with its millions of automobiles and trucks and its vast areas for producing cereal grains. The answer is simple. Our domestic animals, developed through long years of evolution, are marvelously efficient in converting vast quantities of grasses, forage, plants, and other products which are of slight direct value to mankind, into valuable animal products. These products include meats, milk, butter, cheese, leather, fats, wool, mohair, and almost countless by-products, ranging from violin strings to fertilizer.
>
> The United States contains the largest corn-producing region in the world, yet the human population uses only about one-tenth of that crop directly as food. The public appetite much prefers to use the corn crop in the form of juicy steaks and savory hams. Through the stockmen's skill our domestic animals are becoming gradually more efficient in converting coarse feed into refined and concentrated products. As alchemists for the refinement of base materials, cattle, swine and sheep have an enviable record.

As Professor C. W. McCampbell of the Kansas State College of Agriculture has stated, more than two-thirds of our farm and pasture areas produce crops that are largely unsuited for human consumption and must seek their final market in the form of meat, dairy, or poultry products, or must be fed to other farm livestock.

Half the farm land of the United States and a large majority of its farmers are partly or wholly engaged in supplying the country's meat. The farms of the United States comprise about 1061 million acres (or about 56 per cent of its total land area), according to the 1940 Census of Agriculture; and perhaps 600 million, or more than half the total farm acres, supply plain, prairie, or woodland pasturage for livestock. Also, 85 million acres grow hay and other forage crops, and approximately 135 million are used to grow corn, oats, or barley—grains extensively fed to livestock. Thus, about 65 per cent of our farm acreage produces products such as pasturage and hay that humans do not eat.

Almost 5 million farms, out of the national total of more than 6 million, reported raising some cattle. Hogs were grown on nearly 4 million farms, and sheep on almost 600,000.

Over a period of years, approximately 25 per cent of the farmer's cash income has come from the sale of meat animals. Cash received for livestock represents the American farmer's largest single source of cash income. Figures for the last full calendar year, made available by USDA, show that livestock growers received nearly a third of their income, or a total of $4,811,000,000, for their livestock. This sum was $1,569,000,000 more than they received for meat animals during the preceding year, and this trend is continuing in 1943. The increase, approximately 48 per cent, reflected not only a higher level of livestock prices but also materially larger marketings. Producers, of course, paid out large amounts for feed, help, and other operating expenses.

At the same time, according to the National City Bank of New York, more than half the total volume of sales by all food-manufacturing industries represented meat and its products. In contrast, the volume of profit on these sales by meat packers was less than one-fourth of the total profits obtained by all food-manufacturing industries combined.

### SHOULD LIVESTOCK AND MEAT PRODUCTION BE CURTAILED?

In connection with the views expressed in some quarters that livestock numbers and meat production should be materially reduced, it may be worth while to consider briefly certain aspects of the feed situation and of meat production.

What is the true situation? Is it necessary to withhold feed from livestock to produce more food for humans; to limit meat production on the theory that more food thus will be available for human use?

In the absence of full information on the volume of food which the United States may be called on to furnish in the coming months, these questions cannot be answered dogmatically. Undoubtedly it is true that an acre of ground planted to wheat or some other cereal crop will yield a larger number of calories in the form of cereal when fed to humans than it would ultimately in the form of meat if fed to livestock, but such reasoning is faulty from at least two standpoints: First, as indicated previously, a substantial part of the meat on our tables was produced on pasture, hay, and other forage which would be largely wasted if not fed to meat animals. At present, approximately two-thirds of our farm acreage produces products such as pasturage and hay that humans do not eat. Second, while cereals raised directly for human food may provide more calories than could be produced by feeding the grain to livestock, it should be remembered that the calorie is only one measurement of food value and that a diet devoid of animal proteins is a dangerous diet.

Moreover, much of the recent discussion has implied that one pound of grain used for livestock feed is equivalent to a pound of human food. This is misleading in that,

apart from the nutritional differences involved, grains are generally not consumed in their entirety by humans, but require processing, which often results in a large loss in weight, as well as in nutritional value. And when grains are processed, it is significant that livestock offer the chief outlet for many of the by-products of the processing.

It is also pertinent to consider that meat has an important effect on morale, the stuff of which victories are made. The removal of further quantities of meat from the consumer's diet unquestionably would tend seriously to affect the confidence and enthusiasm of a large segment of the domestic population. Officials of the Meat Rationing Section of OPA were confronted last spring with vigorous protests from miners and loggers, who threatened to quit work unless they could get more meat. The effect on morale of soldiers of differences in quantities of meat served has frequently been emphasized by Army officers.

Meat received in the form of lend-lease supplies by our allies also unquestionably contributes to their morale and increases their productive effort: witness the great value, in these respects, of the food sent to Russia.

A comment by a British Cabinet minister to a representative of the USDA early in the war, reported recently by Mr. R. C. Pollock, General Manager, National Live Stock and Meat Board, is pertinent here. The minister said: "A lot of our people look as though they are in very good shape. They are, but they don't have the vitality or staying power. They need more protein. You give us the meat and we will increase our war production 15 to 20 per cent."

"If meat is of such value to our allies overseas," added Mr. Pollock, "it is no less valuable to those of our population who toil in war production plants, offices and homes. These workers need the kind of diets that will keep their production at high levels." And that kind of diet, as Mr. Pollock points out, is built around meat, which a recent Gallup poll shows is man's favorite food.

It is recognized by the highest nutritional authorities that meat is (a) one of the richest protein foods, providing needed protein of the highest biologic value; (b) that it is an excellent source of the important B vitamins—thiamin, riboflavin, niacin; (c) that it contains goodly amounts of much-needed fats, being rich in the unsaturated fatty acids considered by many nutritionists to be necessary in human nutrition; (d) that it provides essential iron, copper, phosphorus; (e) that it stimulates the appetite, thus assuring adequate intake of other needed foods, especially important now when the dietary has to be adjusted to wartime conditions; (f) that it is of high "satiety value"—a meal with meat means a feeling of satisfaction and of well-being; and (g) that its extractives stimulate the flow of the stomach's digestive juices, thus enhancing digestion.

Nutrients found in meat, such as the rich proteins, the essential B vitamins, and important minerals such as iron, copper, and phosphorus, cannot be stored in the body to any appreciable extent and must be supplied daily by the foods we eat.

It also seems probable that the feed shortage problem has been somewhat overemphasized. Although the supply of feed grains per animal unit for the 1943–44 crop year is somewhat less than for the previous crop year, the supply for the coming year compares very favorably with the supply per unit for the 1928–32 average. The effect of the smaller supply, moreover, can be offset through a reduction in the weight of hogs and cattle marketed; that is, by sending them to market at somewhat lighter weights.

There has been much talk about disappearing stocks of wheat, yet Canada, the Argentine, and Australia are reported to be entering the new 1943–44 crop year with a record-breaking carry-over of wheat estimated to total almost 1,225,000,000 bushels, or nearly double Europe's average annual wheat imports during the decade before the war. Argentina actually is reported to be using some wheat as fuel.

Even though feed supplies were short, it would be inconsistent to discuss reducing livestock production sharply until a serious effort had been made to increase feed production in the United States. If necessary, feed grain production can be increased sharply by taking certain fairly simple steps which need not be detailed here.

The building up of soil fertility and its maintenance are closely associated with livestock production, even in a short period of time. A sharp reduction in livestock raising and feeding would, within a year, substantially affect grain crop yields on some farms.

A sharp reduction in livestock numbers, moreover, would result not only in a reduction in meat but also in a substantial reduction in important by-products such as hides, wool, bonemeal, tankage, and glandular extracts, some of which are vitally needed in the war effort.

SUMMARY

According to the best estimates available at this time, supplies of meat for our civilian population in the coming year will be as plentiful as in the recent past. This is salutary, because of the definite contribution of livestock to the fertility of the soil; the excellent use to which the livestock can put otherwise unusable forage crops; the high food value of the product; and the undeniably high morale-building effect of meat.

### *Lend-Lease Foods*

How much food was sliced off each American's helping because we sent food to our fighting allies [in 1943]? Here are a few answers: Beef—one one-hundredth of a pound per week per person in the United States. Pork—two-tenths of a pound. Butter—two one-thousandths of a pound. Cheese—one one-hundredth of a pound. Canned vegetables—eight one-thousandths of a pound.

Our experience in North Africa proved that food in the stomach did a lot toward driving Nazi propaganda from the head . . . . The flow of food from the United States to North Africa already is dwindling, and soon she may even be able to share her vegetable oils and cereals with other freed peoples.—*Roy F. Hendrickson, director, FDA, in Consumers' Guide, November 1943.*

# Editorial

## LOOKING AHEAD IN 1944

As the membership of the American Dietetic Association reaches and passes the 6000 mark and the profession of the dietitian appears to have reached a high point in its upward curve, it might be well to pause and pose the query, "Where do we go from here?"

Obviously, even the present rather phenomenal growth in membership—roughly, a 10 per cent increase over 1942—is not sufficient to meet the current demand for dietitians. The Army continues to call, insistently yet with what unfortunately appears to be a steadily diminishing response. And despite the inducements of living quarters, meals, ample pay and other bait for the applicant, civilian institutions find it difficult indeed to snare the competent, qualified dietitian. Commercial concerns, too, especially those producing foods or food equipment, show an ever increasing tendency to employ women trained at the professional level in foods and nutrition. The salary inducement here often serves to draw off the cream from other fields.

The demand for dietitians is not peculiar to this country alone. Canada is a notable example of a country alert to the importance of placing trained dietitians in posts which they alone are qualified to fill, and England, too, is at last admitting that the "hospital kitchen is at least as important as the hospital dispensary" (*see* abstracts from the *British Medical Journal* under the Current Literature Section of this JOURNAL).

And so the query, where do we go from here? is apt at the moment. The law of supply and demand is inexorable. If the supply of really qualified dietitians is inadequate, then obviously the supply stream must become watered and attenuated in quality in order to meet the increasing demand. Whether we like it or not, this is already happening. Unless every dietitian member of the Association does all in her power to spread her "sphere of influence" to the limit of her ability and thus release qualified assistants to the Army, and unless she likewise serves to the limit of her ability in training young dietitians to fill the ranks, we shall have reached the nadir of that growth curve as to quality. And this *can* happen here, even while we seem to have the golden apple of success within our grasp.

Our most potent answer to the problem at present lies in the current report of the Association's Educational Director, Gladys Hall. It is believed that a total of 950 students will be available for entry into the 70 approved training courses in 1944, and many new training courses are in prospect. But more needs to be done to recruit student dietitians, as pointed out in the postconvention issue of *The A. D. A. Courier*. An important project to be undertaken by the Professional Education Section, under the chairmanship of Dr. Helen Hunscher, deserves immediate attention, that of revising the booklet "Dietetics as a Profession." The suggestion made in Pittsburgh that a booklet be prepared, designed especially for the recruiting of high school students, is also worthy of serious consideration. Another commendable project of this Section is the resolve to encourage vocational guidance meetings to interest college students in majoring in foods and nutrition.

In fact, the members of this Association might well concentrate on the recruitment of dietitians as their major extracurricular activity in 1944.

## THE JOURNAL ALSO SERVES

That the JOURNAL is a useful adjunct in developing the dietitian's "sphere of influence" is attested in a recent communication from Mrs. Cleone Brookins Warner, 1937 graduate of Iowa State College and formerly student dietitian at Indiana University Hospitals and St. Luke's Hospital, New York. Mrs. Warner, now on the staff of the Agricultural Institute, Allahabad, U.P. India, writes as follows:

> The JOURNAL of the American Dietetic Association is certainly doing its part during this war to promote education in foreign countries. It has come through irregularly, but when it finally arrives it is joyfully received. We are very grateful here in India for any new material, since so many publications are not being sent to India for the duration. In my nutrition classes in the Home Economics Department here at the Agricultural Institute I frequently use material from the JOURNAL. The JOURNALS have also been used by others on the staff, from the Dairyman to the Horticulturist. Dr. Kipp, itinerant doctor for the Methodist schools in Northern India, recently borrowed several JOURNALS in order that she might abstract articles from it for the *Indian Christian Medical Journal*. We were recently asked to send material which could be used in an advanced nutrition class taught by Miss Winifred Shannon at the University of Nanking, Chengtu, Szechwan, in Unoccupied China. We sent four articles from the JOURNAL, typed on thin air-mail paper, by air to China. I am quoting a part of Miss Shannon's letter which we received in reply.
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> "Your letter and well-selected material came through in excellent time, and have been eagerly used by my students this week. You could not have suited better several particular needs we had. Then this morning, one of the leading doctors was worrying about material for the *Medical Bulletin* he was supposed to edit each month, and for which he had the money but not the material. The doctors in this section have been without medical material for four years. They had raised several thousand dollars, the fund had been increased by other agencies, and microfilms are said to have reached India—which still does not do us any good here. He was delighted to have the article about protein deficiency and the 'Vitamin Primer.' Both will appear in the first issue of a medical journal which will soon be going to 1200 doctors in Unoccupied China, and some into occupied regions."
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> Surely the JOURNAL can be proud of the service that it is giving in these difficult days.

With regard to her own work Mrs. Warner writes:

> The Home Economics Department at the Agricultural Institute is only seven years old, but it is already receiving recognition all over India. The course is only for two years, but even then our graduates are in great demand as teachers of home economics. I was greatly encouraged lately when a nurse at a large hospital in Southern India wrote asking us if we had any girls trained as dietitians. This is the first request of its type that I have heard of, for in India, so far, there is no place for a dietitian in the general plan of the hospital. I know of only two hospitals in India that employ trained dietitians. Last year at a Medical Conference in Landour, Mussoorie, I read a paper on diet, and urged that more emphasis be placed upon diet therapy in our hospitals, but I have found, after being in India three years, that one cannot hurry the East.
>
> The notes and articles in the recent JOURNALS on the dietitian in the Army have been very interesting. I visited an Army kitchen last year with the Quartermaster as guide. The equipment looked "super" and since it was near mealtime, the force was busy preparing the meal. The tinned goods on the shelves looked especially inviting to me, for we live "off the land" completely. When I first arrived in India we were able to get tinned pineapple and salmon at fairly reasonable price, but now, alas, they too are gone. It has been grand seeing the American boys and having them in our home. They like to eat at a table with a cloth on it

and enjoy the luxury of napkins. They like our food, even spinach and liver! That's what a home does to them. The boys will have a lot to tell about when they get back to the States, but how glad they will be to get back!

## DIETITIANS IN THE ARMED SERVICES

Immediately following this editorial, are four first-hand accounts of the work of the dietitian in the present war. Dietitian veterans of the preceding war will be impressed by the more efficient organization of the dietitian's responsibilities at present and by the very evident trend toward placing full responsibility where it is due, and the gradual elimination of that divided and uncertain authority which hampered the Army dietitian in World War I.

Thus in twenty-five years the Army dietitian's material advancement has carried her from military nonentity, $60 a month with an increase of $10 monthly for overseas duty, and a paucity of rights, privileges, and gratuities, to a well-defined commissioned military rank, adequate pay, and all the benefits that accrue to military personnel who risk their lives and well-being in the service of their country. Material advancement, yes, but we have yet to witness an advancement in spirit of service, judged by the total number of enlistments to date in the Medical Department of the Army (and in the light of the fact that in 1917–18 there was no national association, no group momentum to encourage enlistments) to surpass that of 1917–18. For twenty-five years ago a total of 356 volunteered unconditionally as Red Cross dietitians for service in Army hospitals, and 84 of these served overseas. Today, with a well-organized national Association, strong in numbers and in scope, only 1100 are in the service of the Army Medical Department, and this two years after Pearl Harbor.

What is the reason for this disproportionate response? Our most charitable inference would be thoughtlessness, lack of awareness of the great need for better food and adequate dietary care for the thousands and perhaps tens of thousands of desperately injured, brave young men who are fighting for us. Medicine is accomplishing veritable miracles in this war, but good food performs its own miracles in the full recovery of these young men and many times is a major factor in saving their lives. And it takes women to do the job—young, strong, trained women, who will brook no hindrances in the performance of their duty. The importance of good food, hot and appetizing, can be attested by those who have seen these young men, as they arrive from first line dressing stations at the base hospitals, dirty, unshaven, pale, and suffering, respond amazingly to the care of devoted Army nurses and to this good food, skilfully produced, despite the limitations of battle zones, through the efforts of a dietitian. They will also affirm that this good food is as urgently important as is good nursing care.

When the war is over, you will see some of these young men returning home. Some, perhaps close to you or to your friends, will never return. And you will ask yourself: What did I do to help them? Let the answer be one which will not have to be explained on the basis of selfishness or egocentric thinking. Let it be proudly said: I served to the best of my ability and without thought of personal danger or discomfort. The easiest way to live through a war is actively to participate in it—and you who are young and physically fit have an opportunity to do just that.

# *Nutrition and the War*

## DIETITIANS IN THE ROYAL CANADIAN AIR FORCE[1]

SQUADRON OFFICER KATHLEEN JEFFS

*Chief Messing Officer, RCAF*

I appreciate the honor you do me in inviting me to speak to members of the American Dietetic Association convened here in Pittsburgh for your Wartime Convention. It is my special privilege to bring cordial greetings from dietitians in the Royal Canadian Air Force to all members of this Association, and in particular to those members who now serve in your armed forces.

SQUADRON OFFICER KATHLEEN JEFFS

It is particularly significant that we meet here, not only as fellow dietitians but as fellow officers with a common professional purpose directed toward the service of our countries through the contribution of our professional knowledge. As a dietitian from one of the fighting services of your good neighbor, Canada, I am proud to be present along with dietitian members of the Army Medical Department, Army of the United States, and the Waves and Wacs on the first occasion that a section of your program is devoted to "Dietitians in the Armed Forces." At no time in the history of our two countries have mutual collaboration, reciprocal action, and interchange of ideas and things played a more significant and vital part. Canada and the United States of America for many years have been a notable example of friendly neighbors. Our governments have in large measure similar interests in international policies. We believe we will continue to demonstrate how two neighboring countries that long

[1]This and the following four papers were read before The American Dietetic Association, Pittsburgh, October 20, 1943.

enjoyed friendly relations may promote their mutual interests for the benefit of themselves and other nations.

Hence I am fully appreciative of this opportunity of meeting American women who serve in a similar capacity in your forces and of discussing with them problems of mutual interest and concern in the realm of service feeding. First, I shall discuss briefly the more general subject of Canadian women in our services. Canada's defense forces comprise three services, the Royal Canadian Navy, the Canadian Army, and the Royal Canadian Air Force, each with its component women's service, namely, the Women's Royal Canadian Naval Service, the Canadian Women's Army Corps and the Royal Canadian Air Force (W.D.). Of Canada's population of over 11,500,000 persons, there is now a total of 30,000 women in the three services: 4000 in the WRCNS, 13,000 in the CWAC, and 13,000 in the RCAF (W.D.). The WRCNS, the most recently organized women's service, was established in June 1942. The other two women's services have now celebrated their second birthday.

Women enlist in the RCAF as do men, for the duration of the war and "as long thereafter as His Majesty may require their services." They are prepared to serve wherever required and are on duty with the RCAF not only in Canada, but in Newfoundland, Great Britain, and the United States.

We have in Canada a vast air training scheme known as the British Commonwealth Air Training Plan. This is a joint enterprise of the Canadian, Australian, New Zealand, and United Kingdom Governments. It is administered by the RCAF and designed to set up a common system to train air crew to man our planes and to teach the art of air combat. This vast university of the air is housed in the many air training schools located across Canada from coast to coast. There are now more than 10,000 training craft in use under this scheme. To these schools 100 Canadian dietitians have already been posted to organize, supervise, and administer the feeding of our personnel.

For purposes of administration, the RCAF is divided into six commands (or districts) with an over-riding administrative headquarters divided into seven divisions, namely, Personnel, Training, Supply, Engineering, Accounting, etc. The feeding of all personnel in the RCAF is the responsibility of the Air Member for Supply in whose division we are appointed.

It is not necessary for me to review before this Association all the factors influencing and leading up to a change in policy and attitude toward the feeding of the personnel of this Service. We are all aware that the last war had a very great influence on the development of our knowledge of the function of food and of food problems. From the vast expansion of food research that has developed since then, present-day governments have been provided with a wealth of information both technical and scientific regarding nutritional problems. During the last war new discoveries were just beginning to reveal the existence of vitamins and to open up avenues of research and sources of information on both the scientific and technical sides of food preparation. The outbreak of this second world war has stimulated and aroused our leaders to the vital part that food is destined to play in the outcome of this struggle. We know that food—its production, supply, and transportation—takes precedence over all other national undertakings, whether the production of arms and tanks, the manufacture of aircraft, or the building of ships in our dockyards; it is without exception our strongest ally.

The Directorate of Medical Services (Air) were in large measure responsible for a new attitude by this Service toward food problems and their improvement. In the early months of the war they were aware that some change in policy was required to bring the feeding of its personnel in line with scientific and technical advances made in all other branches of the Service. In the light of modern knowledge, the *laissez faire* attitude of the last war toward the "cook-house" was doomed. They were aware that physical fitness adequate to meet the exacting tests of this war demands optimum health which comes only through optimum nutrition. For at least 20 years McCollum has taught that there are important differences between the merely adequate and the optimal in nutrition, that health is not merely the absence of disease but a positive quality of life which can be built to higher levels—buoyant health as distinguished from passable health. Accordingly, in September 1941, the Directorate recommended that dietitians, preferably those with experience in supervision of food preparation on a larger scale, be appointed in this Service.

With the aim of ensuring the highest possible standards of food service the RCAF, early in 1942, authorized the reorganization of its Messing Branch and placed the administration of its food problems in all its various phases in the hands of persons trained both in the art of cookery and in the science of nutrition. Hence, in February 1942, the first dietitian was appointed in the RCAF and the following April 7, senior dietitians to fill staff positions at each Command Headquarters. There are to date 100 dietitians in this Service and many vacancies still exist. The organization, at present, provides for a Senior Messing Officer and assistants at Air Force Headquarters, who deal with matters of policy; at each Command Headquarters, a Messing Officer who acts as advisory and inspecting officer within her district, and at stations, Unit Messing Officers, whose duties will be outlined in detail later.

The entrance qualifications for dietitians in the RCAF are laid down in a Manning Order as follows: age limits, 21 to 40; medical category, A4B or higher; education, degree in household science or household economics recognized by the Canadian Dietetic Association; civilian experience, practical experience in the various fields of dietetics; rank on appointment, assistant section officer. In addition, candidates must be of good character, appearance and personality and have a record of proved ability in the profession of dietetics. Letters of reference should include a letter from the dean of the School of Household Science from which the applicant graduated and from a previous employer, if any.

Dietitians are commissioned directly on entrance and are required to complete a 10-week course of training. During this period they are instructed in RCAF organization, procedure, regulations, and drill. At the conclusion of service training a further period is devoted to lectures on professional subjects relating to service messing under the following headings: Duties of Messing Officer, Kitchen Administration, Staff Training, Menu Planning—Use of RCAF Ration, Food Preparation and Cookery, Use and Care of Kitchen Equipment, Housekeeping and Sanitation, and Inventories and Records. The Medical Services provide lectures on general medicine and physiological problems of the RCAF, nutritional requirements of the Service and results of food assays and experiments in regard to special feeding problems.

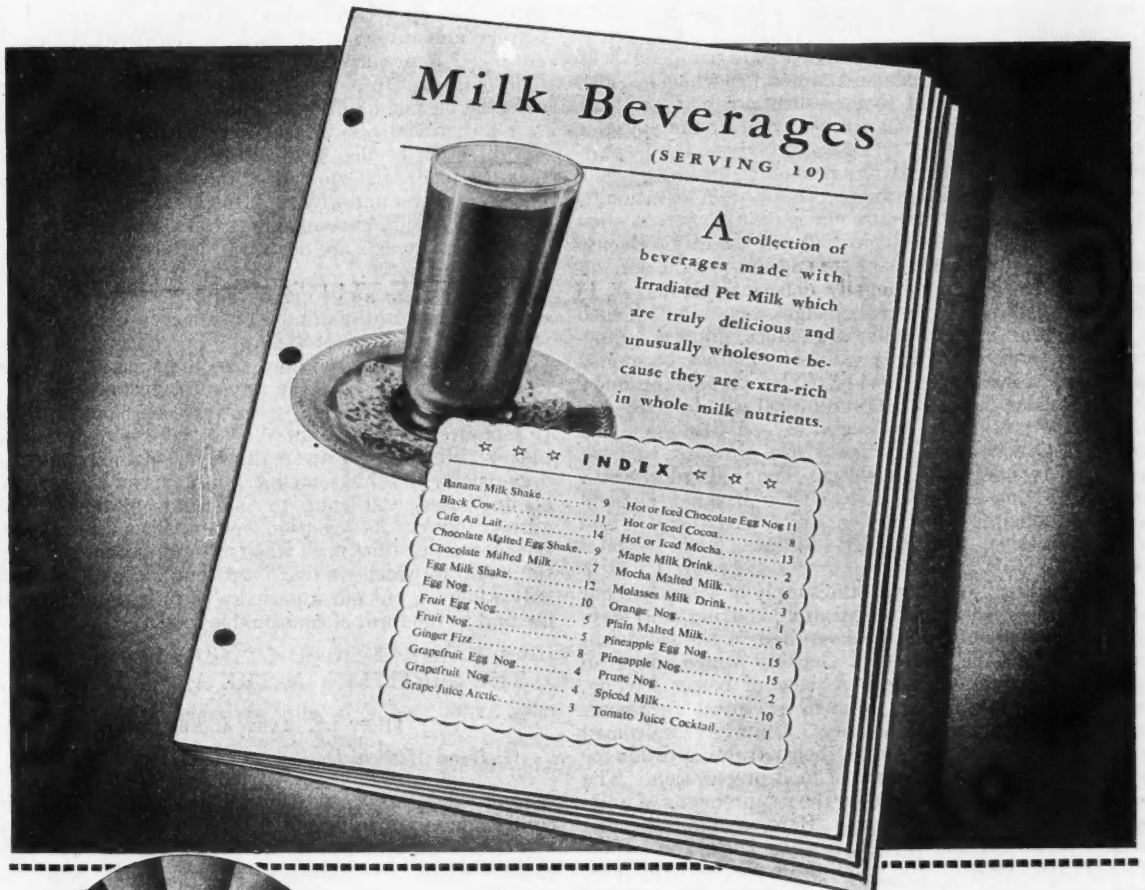
On completion of her training the dietitian is posted to an RCAF unit where she assumes the responsibility of messing officer of the unit. A Messing Officer's duties outlined in an Air Force Administrative Order are as follows: (1) The preparation of all diet sheets. (2) Indenting for the unit's daily ration requirements and special diet requirements as recommended by the Medical Officer. (3) Organization and direction of work of kitchen and mess

THIS new collection of tested recipes has many uses—for example, nourishments, special diets and for those who need whole milk, but do not like to drink it just as milk.

These recipes show how Irradiated Pet Milk can be used to prepare beverages with a smooth, creamy consistency and a fine, rich flavor that are, at the same time, more wholesome and less expensive.

The beverages made from these recipes are more wholesome because, calling for Pet Milk, they include more whole milk substances and an extra amount of vitamin D than if made with the milk that is generally sold in bottles. Irradiated Pet Milk diluted with an equal part of water contains 4.08% butterfat, and when sufficient water is added to the content of a tall can to make a quart, it contains 3.34% butterfat

These beverages cost less because Irradiated Pet Milk costs less generally than ordinary milk.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Grapefruit Nog 4
Grape Juice Arctic 3
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Hot or Iced Cocoa 8
Hot or Iced Mocha 13
Maple Milk Drink 2
Mocha Malted Milk 6
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staff in the preparation, cooking and service of food and direct supervision of the efficiency, cleanliness, appearance, and deportment of the staff. (4) Care and maintenance of equipment, utensils, and crockery, and instruction of personnel in the proper use of heavy kitchen equipment. (5) Cleanliness of mess halls and kitchens. (6) Preparation of the required messing report for transmission to Command Headquarters. (7) Inspection of garbage cans before removal by the contractor, with a view to the prevention of pilfering and waste.

The problems of messing in our Air Force are not similar to the problems of feeding an army or navy. The Air Force maintains stations of semipermanent construction for both flying training and air operations. The field kitchen is not used except in certain operational areas. The average RCAF training station has 3 separate messes, one for officers, one for noncommissioned officers, and one for other ranks. The dietitian's first concern is for the standard of meals, and the organization and instruction of personnel.

The Canadian Army and RCAF are supplied with rations according to a scale of commodities which specifies the weight of each food to be issued per man per day. This scale and any revisions are approved by the Standing Committee on Nutrition, an advisory body to the Department of Defense on all matters pertaining to ration scales for the three Canadian services. Our system of rationing has not the flexibility of yours nor quite so generous a list of alternatives. At the outbreak of war the ration then in effect was very obviously obsolete and in the light of modern knowledge was nutritionally deficient. However, in June 1942 certain very radical changes were adopted, such as the addition of more milk, vegetables, oranges, grapefruit juice, and ham, while canned tomatoes became a compulsory issue twice weekly. The present ordinary ration provides between 3800 and 3900 calories, 151 gm. protein, 166 gm. fat, and 456 gm. carbohydrate per man per day. Other scales of rations are provided to meet particular requirements, such as: The Labrador Scale, Standard Flying Rations, Rations for Isolated Detachments, Rations for Construction Units, Coast Watch and Reserve Rations, Shelter Hut Rations, and Hospital Rations.

At the outbreak of the war, the supply of cooks familiar with the proper selection, preparation, cooking, and serving of food was limited. This resulted in the establishment of the RCAF School of Cookery which plays an important part in our whole scheme of better feeding. Here cooks, both men and women, are given an 8-week training course in practical cookery. Units have welcomed the arrival of women cooks with their natural aptitude for cookery and the detailed work of food preparation. The methods and recipes are based on the requirements of units engaged in large-scale cookery. Here, and all through the Service, an effort is made to instil in cooks the important part that cookery and good meals play in happiness, health, and morale. If the cook is to carry out our ideas of better feeding, he must acquire a greater appreciation for his trade and a greater pride in an art that is old, honorable, and vital to health and happiness. In order to further this attitude we must provide him with adequate technical instruction and the inspiration for higher standards of food preparation. Toward this end the trade of cooks has recently been raised to an "A" grouping, the highest grouping given to any trade in our Service.

The RCAF, under the supervision of the Messing Branch, maintains a practical experimental test kitchen to provide all sorts of information regarding feeding problems. Its first and paramount task is to develop accurate and suitable recipes, based on our ration and suited to the type of kitchen equipment provided. Experiments are being carried out to provide improved methods of cooking dehydrated foods in quantities larger than that ordinarily used for experimental work. Ways and means of using that valuable source of thiamin, whole-grain cereals, other than in porridge, are being investigated, also best methods of large quantity cookery of vegetables for the retention of all possible nutritional value, and how to make desiccated eggs taste more nearly like the fresh product when scrambled. I could mention many other projects now under development, and when I tell you that our ration scale does not provide such luxuries as spices, flavorings, extracts, canned fruits and packaged dates, you will more readily appreciate the possibilities of this test kitchen in providing the maximum in interest, flavor, and nutrition from our scale of rations.

Under the supervision of the Director of Medical Services (Air) four nutritional laboratories have been set up, three in conjunction with Canadian universities, for the testing and assaying of foods to ensure that the best methods of preparation, storage, and service are being followed, and to devise means of preventing losses of essential elements during the handling of food.

A nutritional film, "Training Table," produced under the direction of the Medical Services, aims to show our men the foods that are needed for top health and physical fitness, and how and why these foods are required. It illustrates why milk, cheese, eggs, fresh fruit, vegetables, and whole-grain cereals are needed to build and support bone, muscle, and nerve.

I have endeavored to give you a general picture of our messing organization and our aims for improving the standard of meals in the RCAF. I do not intend to weary you with all the vicissitudes, discouragements, and obstacles that confront us. We refuse to recognize them.

As professional women we are very conscious of the need to measure up to such an almost overwhelming responsibility. We are more aware, however, of the privilege and opportunity to bring some increased measure of happiness, comfort, and well-being to thousands of our Canadian airmen today. As scientific women let us remember that science only justifies itself when it "renders more intelligent the world in which we live" and that we justify ourselves only when we put our knowledge of nutrition to practical use and in the form of consumable food.

## THE DIETITIAN IN THE ARMY HOSPITAL

FIRST LT. MARY A. STREIDL

*Head Medical Department Dietitian, A. U. S.*

Every dietitian must help win this war, whether in a civilian or military capacity. If you are a dietitian and can conceivably be spared from your present duties, you should enroll for military service. The Army *does* need you.

The dietitian in the Army has every occasion to use her training and experience to the utmost. She works with the Mess Officer and assists him with all problems pertaining to the mess. She is responsible for the patients' food service in its entirety. At the Station Hospital, Fort Leonard Wood, we have 5 mess halls: the bed patients, the ambulatory patients, the patients mess for prisoners of war, the enlisted mens mess, and the officers mess. We serve a total of from 7000 to 10,000 meals per day.

The dietitian supervises the preparation and service of the food, plans all menus, keeping the food costs within the prescribed allowance, and writes all special diets. She instructs all special diet patients in their diets, orders

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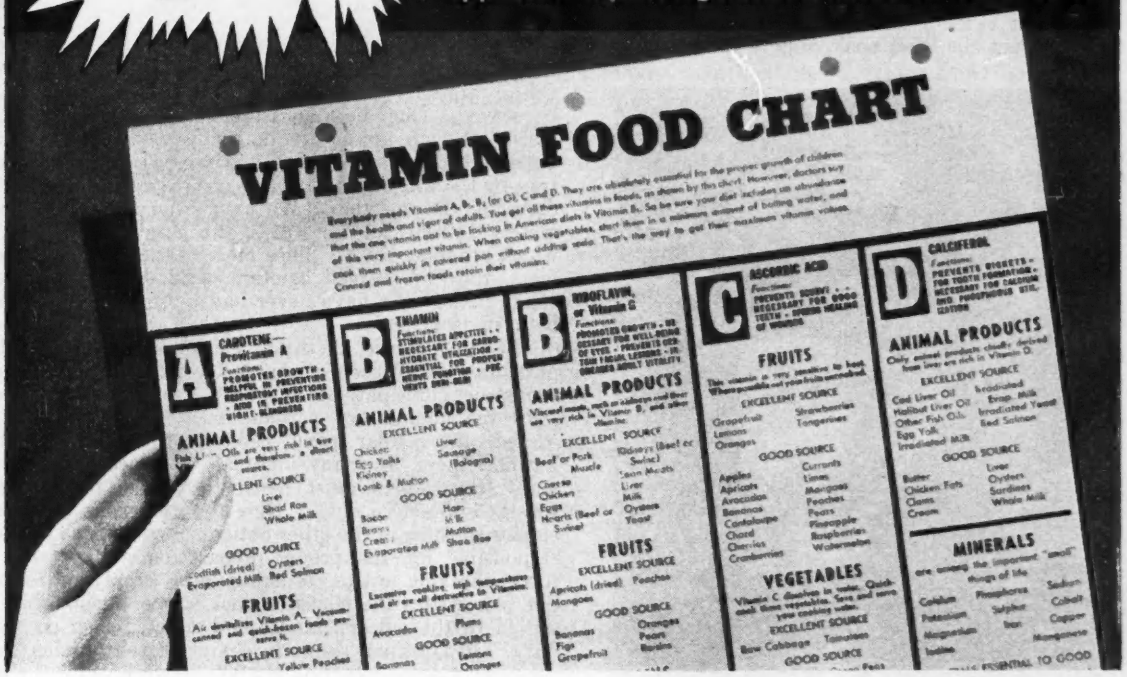

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*"Enriched 5 Minute" Cream of Wheat cooks to complete digestibility in exactly five minutes! Supplies Vitamin $B_1$, niacin, calcium, phosphorus and iron.*

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all food supplies, checks and directs the care of supplies on hand, checks requisitions, and keeps a record of food costs. She supplies standardized recipes to the cooks, makes menu changes, checks leftovers, and makes use of these as far as possible. The dietitian also checks food carts and food waste, makes ward rounds, and records the daily census. She assists in the ordering of all equipment in the messes.

Each mess hall has a mess sergeant in charge of personnel and cleanliness of the mess. Dietitians and mess sergeants work together in promoting the efficient operation of the mess.

In the patients mess, from which the food carts are loaded and sent to the wards, one administrative dietitian and an apprentice assistant are on duty and are responsible for ordering fruits, vegetables, and staple goods needed. Orders are sent twice a week to the commissary. The dietitians instruct the head cook, supply recipes needed,

FIRST LT. MARY A. STREIDL

check the daily requisition, and make an inventory of the contents of the refrigerators. They incorporate leftovers into the menu, or suggest these be used in other messes. They check food returned from wards to determine the cause of waste and suggest the cure. All baking for the hospital messes is done in this mess hall at night, under the supervision of a dietitian. The orders for baked goods are combined here, recipes supplied, and the products checked and distributed the following morning. A baked goods order for one day may include 300 pies, 90 gallons of pudding, and 35 pans of coffee cake.

Sending out food to some 50 wards demands a well-devised system. Every morning the ward nurse submits a diet slip with the census and a list of supplies needed for the day. From this the dietitian makes out in duplicate her food chart for each meal. Cold foods are placed on the cart first, then the hot foods from the steam-table. Each cook has a list of the hot foods and the number of servings for each ward, and the dietitian checks the carts from the duplicate copy of this list. A medical corps man from each ward calls for the food which is kept hot in the ward diet kitchen until served by the nurse with the help of the corps men. Dietitians make ward rounds during meals to check with the patients regarding their food. They also inspect the quantity of supplies in the ward refrigerators and discuss with the nurses in charge the many problems of ward food service. Supplies such as fruit juices, fruit, salt, and sugar are delivered daily to each ward on a large special cart from the main kitchen of this mess hall.

From this mess hall, too, a daily requisition of food supplies is sent to the war prisoner patients mess. The dietitian sends the menu and special diet slips with the supplies. Since the prisoners do the cooking, an interpreter is used to translate the menus and to instruct their head cook.

Special diets are written and prepared in the bed patients mess. Special diet requisitions, signed by the Ward Officer, are sent to this office 4 hours before the meal is to be served. One dietitian is in charge of special diets, assisted by an apprentice or graduate trainee. Special diets for bed patients are sent to the wards and served on a tray by the ward nurse according to instructions furnished daily by the dietitian. We have been serving approximately 110 special diet trays, the largest percentage of which are ulcer diets. Since most of these are final ulcer diets, they are served cafeteria-style directly from the steam-table. We have never had more than 3 or 4 diabetic diets at a time.

The therapeutic dietitian instructs all special diet patients prior to their discharge. She is also called upon to instruct clinic patients at the Attending Surgeon's office.

In the ambulatory patients mess only one menu is served—the regular menu, cafeteria-style. In an Army hospital there are many ambulatory patients, of course, since the soldiers must reach this stage before being returned to active duty. Here the dietitian's duties are similar to those in the other patients messes, such as being responsible for the proper preparation and serving of food, checking waste, ordering, and supplying recipes. She also writes the eleven o'clock supper menu which is served to the officers, nurses and enlisted men on night duty. In addition, she is in charge of the butcher shop where all the meat cutting (12,000 lb. weekly) for the two patients messes is done by 5 meat cutters. The dietitian orders the meat and directs the amounts to be sent to the other messes.

The detachment mess serves all the enlisted personnel of the hospital. Here the field ration menu is used, which means that the food is issued daily in kind according to the menus prepared by the Quartermaster. The dietitian, however, can improve these menus by alteration and substitution. She also supplies standardized recipes and checks the preparation of the food, reports all shortages, checks all leftovers, and instructs the mess sergeant as to utilization of these.

Another dietitian is assigned to the officers mess. She writes her own menus and all special diets for officer patients of the hospital. She checks the food carts going to the officers wards and visits the patients daily. She has charge of the baking, meat cutting, cooking, food cost accounting, and ordering. She supervises any special dinners, buffet suppers and picnics.

As Head Medical Department Dietitian, the correlation of all activities of the 5 mess halls is my responsibility. With the Mess Officer, I make daily rounds of the messes to discuss any problems with the dietitians and mess sergeants. All food records are kept and the food cost accounting is done in my office. Orders for meats, vege-

# Two cereals suitable for the diet in Gastro-Intestinal cases

The restricted diet prescribed in gastro-intestinal conditions is often deficient in thiamine. Both Gerber's Cereal Food and Gerber's Strained Oatmeal are enriched with this and also other members of the B-complex vitamins.

In addition, some riboflavin is supplied in the milk which accompanies each serving of the cereals.

### *Helpful in Iron Deficiency, too*

Antacids sometimes interfere with normal absorption of iron from the intestinal tract. Both Gerber's Cereal Food and Gerber's Strained Oatmeal are enriched with iron pyrophosphate, a satisfactory source of iron.

### *Low in Crude Fibre*

The crude fibre content for both cereals as shown in the table below, is reduced to less than 0.2% when the milk is added. This fibre is finely divided, as it is non-irritating to the digestive tract of infants as young as one month old.

### *Good Taste*

Gerber's Cereal Food and Gerber's Strained Oatmeal have a good taste, which makes them attractive to adults. Monotony may be avoided by alternating the cereals. Adding strained fruits or juices is a good way of introducing them into the diet, and adding variety in flavor at the same time.

Both cereals are pre-cooked. Just add hot milk or cold milk and serve.

**Nutritive Values of Gerber's Cereals**

| | Thiamine mg. | Iron mg. | Calories | Crude Fibre % |
|---|---|---|---|---|
| One ounce Gerber's Cereal Food | 0.39 | 12.5 | 106 | 1.4* |
| One ounce Gerber's Strained Oatmeal | 0.37 | 12.0 | 110 | 1.0* |

*½ oz. dry cereal with 2 oz. milk: Cereal Food .28% crude fibre, Oatmeal .2% crude fibre.

**Gerber's**

CEREALS STRAINED FOODS CHOPPED FOODS

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tables, fruits, and staples from all messes are sent here, recorded and combined, and sent to the commissary. Here all special orders, advanced orders, and outside orders are placed. Since the hospital patients mess is on garrison ration, we may buy from outside markets any foods we need which are not available at the commissary. To do this, a request is sent to the Quartermaster who returns an Out-of-Stock Certificate from which we may order from outside companies. On account of present shortages we place advanced orders for meat a month in advance. All menus are checked, training programs directed, and all records are kept in this office.

Menu planning in the Army is governed by much the same rules as in civilian hospitals; however, the regular menu is much heavier because of the ambulatory patients. Menus must be comparatively simple because the cooks are not always highly trained and because of the large quantities of food to be prepared. Equipment is fairly adequate, but it is not well to plan more than one dish requiring a given type of preparation, such as baking, for the same meal.

There is considerable opportunity for teaching in the Army. We have been called upon at various times to teach classes at cooks, bakers, and mess sergeants schools, and to instruct mess officers on the post on subjects such as menu planning and preservation of the nutritive value of the food. Mess officers of the post often call on the dietitian for advice in regard to their food problems. Weekly lectures are given to the corps men on the elements of nutrition and feeding the patient. These men serve the food on the wards under the direction of the nurses. Recently we completed an 8-hour course on hospital dietetics to 300 enlisted men from a general hospital unit in training at Fort Leonard Wood. The dietitian also visits and instructs the patients individually. We have conducted several Red Cross nutrition courses and one canteen course for wives of officers and enlisted men.

Since July 1942, civilian dietitians who have volunteered for service with hospital units overseas have been assigned here. These dietitians gain experience in Army methods and procedures in each mess hall preparatory to foreign service. While serving with us, each graduate compiles a complete book of material for the operation of Army messes: work schedules for all employees; the complete charting system; sample diet slips, mess office records, and different types of menus; methods of purchasing, including all forms used, the inventory system and cost accounting books, and floor plans.

We now have a 6-month apprentice plan at the Station Hospital. After 6 months in an approved training course, students spend another 6 months in an Army hospital. (Appointees who have completed the course at civilian hospitals are selected from U. S. Civil Service list of eligibles.) This experience assignment includes 1 week on food cost and ordering, 2 weeks in officers mess, 1 month in the detachment mess and ambulatory patients mess, 2 months in the bed patients mess, and 2 months on therapeutic routine in that mess.

Problem assignments include: standardization of recipes, waste studies, floor plans, equipment charts, personnel organization charts, food cost studies, planning menus with due regard for protein, fat, carbohydrate, mineral and vitamin content, cost studies on special diets, case histories, and special diet classes for patients.

There are 15 hours of lectures, 15 hours devoted to a seminar on administration of the dietary department and, in addition, 15 hours of lecture and 15 hours of seminar on therapeutic dietetics. Apprentice dietitians also attend all medical staff meetings and lectures on Army administration for officers. During the training period the apprentice learns what is expected of an Army officer, the Army way of life, and the intricacies of Army etiquette.

Monthly reports are sent to the Director of Training Programs at Washington on the progress of the apprentice. Upon completion of the course, the apprentice takes a final physical examination and with the recommendation of the Head Dietitian and Commanding Officer, she is inducted into the Army of the United States as a Medical Department Dietitian, with the rank of second lieutenant.

Promotions of Medical Department Dietitians are made in accordance with Army Regulations and are dependent upon experience, adaptability, existing vacancies, and recommendations of the Commanding Officer. Medical Department Dietitians are members of the Medical Department of the Army. While they are not members of the Army Nurse Corps, they do have the same rights, privileges, benefits and gratuities, and uniforms (except for distinctive insignia) as members of the Army Nurse Corps.

The Head Dietitian is charged with the instruction, assignment, discipline, and performance of duties of all dietitians on duty at the hospital. She acts as a liaison between the dietitians and heads of other departments. The dietitian in the Army hospital must have a thorough knowledge of all of the various methods and procedures of the Army, as well as of the activities of her department and of all other departments of the hospital. The Commanding Officer depends on her to keep up the food standards and service of the hospital.

## THE DIETITIAN IN THE NAVY

LT. (J.G.) MARY KATHARINE BROWN, W-V(S)SC, USNR

*U. S. Naval Training School (W. R.)*

Women with training and experience in dietetics and home economics have been in the Women's Reserve of the Navy since its organization. They are filling many important billets and are rendering many valuable services. It seemed worthwhile to me, therefore, to describe what I have learned of the work they are doing and the benefits they derive from their service.

The importance of the work of these women is evidenced in a statement made by Rear Admiral William Brent Young, Chief of the Bureau of Supplies and Accounts and Paymaster General of the Navy, when he announced that officers of the Women's Reserve who are expert dietitians are being assigned to Naval stations as assistant commissary officers to aid in improving both the nutritional value and palatability of the food served Naval personnel. Admiral Young said:

> The assignment of officers of the Women's Reserve, who know how to make food appetizing while utilizing its full nutritional value, to aid in improving the Navy's diet, is another forward step in the Navy's constant efforts to give its personnel the best possible food, meals that are good and good for them. Greater emphasis on the palatability of food and serving it in an appetizing manner is, in reality, a phase of the Navy's Food Conservation Program. It is believed that expert women dietitians who are trained as officers of the Women's Reserve will be able to make food more homelike and, as a result, more popular with the men.
>
> The dietitian will further contribute to the conservation of food by suggesting more appetizing ways to serve the various substitutes for scarce foodstuffs and prepare more palatable dishes from leftovers.

Admiral Young also announced a plan to assign qualified dietitians who are officers of the Women's Reserve to Naval activities as rapidly as they can be trained in Navy subsistence methods. As you perhaps know, the subsistence, or feeding, of the personnel of the Navy is under the direction of the Bureau of Supplies and Accounts. The

# The Newer Concepts of Meat in Nutrition

## Meat . . .

## The Demands of War, and The Protein Needs of the Patient

WHILE the demands of war perforce had to curtail civilian meat supplies, the needs of the ill have not been overlooked in rationing regulations. The prerogative of the physician—to specify the requirements of his patient—is given the recognition it deserves.

Though hospital allotments were originally held to 80% of supplies used during December 1942, every hospital was given the right to ask for additional supplies, not only because December is one of the low hospital months of the year, but also because changes in hospitalization needs obviously cannot be predicted.

For the nonhospitalized patient under the physician's continuing care, the physician's delineation of the patient's requirements usually is promptly recognized by rationing boards.

In the many instances when the dietary calls for a greater meat allowance because of increased protein needs, as in

PROLONGED INFECTIOUS DISEASE . .

AFTER SURGERY AND EXTENSIVE TRAUMA . .

THE ANEMIAS . .

ENTERIC DISEASE . .

MYXEDEMA . .

NEPHROSIS . .

CERTAIN URINARY INFECTIONS, ETC.,

it remains as always the physician's responsibility and privilege to specify the required amount.

It speaks well for America and its regard for the preservation of life that even in a global war of unprecedented proportions the physician's requests are promptly granted.

*The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.*

ACCEPTED AMERICAN MEDICAL ASSN.

***American Meat Institute***

*CHICAGO*

Subsistence Division of this Bureau is responsible for all problems relating to procuring and supplying food.

Officers of the Women's Reserve with dietetic and home economics training are stationed in the Subsistence Division in Washington. Here they analyze menus sent from Headquarters, for nutritional balance and from the standpoint of cost and caloric value. The Women's Reserve Officers have given many valuable suggestions regarding menus and other matters concerned with food. For instance, they have assisted in planning special emergency rations for life-raft and other small auxiliary craft, which requires a knowledge of nutrition and dietetics. In addition they are contributing to the constantly expanding work on recipes, including the selection, planning, testing, checking, and proofreading of such recipes, which are then sent to Naval galleys both ashore and afloat.

LT. (J.G.) MARY KATHARINE BROWN, W-V(S)SC, USNR

The demand for special types of services in relation to food is growing daily, and there will be an increasing need in the Research and Nutrition Division of Subsistence for women with technical and scientific training. This demand will be accentuated as the value of these trained women becomes more apparent.

Wherever messes are maintained, the actual feeding is under the supervision of a supply or commissary officer, not only ashore, but also on most ships. The majority of Women's Reserve Officers in the Navy who have dietetic or home economics training are serving as commissary and assistant commissary officers at shore stations within continental United States. Their duties are many and varied and the scope of their work limited only by the size of the station to which they are assigned. In order to give you a fair picture of the work being done by these officers, I will list some of their duties:

1. Planning menus, or acting as members of the Menu Board on some of the large stations. (This service is of special value where women are being fed, as the traditional Navy diet is too heavy and too starchy for women.)
2. Analyzing daily menus for adequacy of food value.
3. Ordering and requisitioning provisions.
4. Receiving and inspecting provisions upon arrival.
5. Supervising preparation of food and assuming responsibility for the cleanliness of the galley.
6. Assuming responsibility for storeroom inventories.
7. Supervising the work of commissary storekeepers.
8. Checking waste in the storerooms and cold storage plants, in the galley, and on the mess line.

In addition to the above, Women's Reserve Officers in the commissary departments prepare or assist in the preparation of monthly and quarterly returns, and manage ration banking accounts. On stations where there are cooks and bakers schools for enlisted men they act as instructors. In similar schools now being set up for enlisted women it is obvious that women commissioned officers and petty officers will play a most important part. One Women's Reserve Officer is assisting in the operation of a Commissary store. Another acts as Educational Officer, conducting examinations for the commissary personnel of her station who are in line for advanced rating. Still another has had the responsibility of supervising the equipping of galley and mess hall at a new station.

In addition to commissary duty, some women officers with home economics and dietetic experience and training are filling billets in charge of officers clubs and officers messes, and are supervising general mess halls. Many others are doing personnel work throughout the Navy. A few are serving in Naval hospitals.

The work being done by enlisted women with dietetic or home economics backgrounds is equally interesting. They serve as storekeepers in the commissary departments, assist with menu planning, ordering, and mess hall supervision, and serve as ship's cooks from which they may advance to chief commissary steward. They also act as instructors in cooks and bakers schools for enlisted women, while some have been assigned to the Hospital Corps. Although they are not commissioned officers, their contribution is considerable and their services are valuable. After 6 months of service they are eligible for officer's training.

Women have been serving with the armed forces of this country for many months. Experience has adequately demonstrated that they have a definite place and that they are rendering a valuable service. The excellent work done by the officers and enlisted personnel of the Women's Army Corps, the Women of the Marine Corps and the Coast Guard, and our own Women Appointed for Volunteer Emergency Service, has been recognized by all those who have had occasion to observe these women on duty.

Those of us in the Women's Reserve, whether officers or enlisted members, know that we are fulfilling the purpose for which we were brought into the service—replacing men for sea duty. Our dietitians or home economists have the additional satisfaction of knowing that they are bringing practical dietetics to the Navy. The need for dietitians in the Navy is now recognized, and women with good training and experience are in demand. Also, an effort is being made to re-billet those who entered service before a definite program had been established.

We are deriving great benefits because we know we are part of the war effort; we have an opportunity to put dietetics into practice in feeding large numbers under unusual circumstances; the associations are congenial, the compensation is good. I believe that every dietitian and home economist in the Navy, regardless of her rank, is proud of the part she is playing.

# So that "Your" Babies will get VITAMIN D

## "REGULAR AS A CLOCK"

## *Irradiated* EVAPORATED MILK

You have a simple, effective, *dependable* way to assure Vitamin D for bottle-fed babies when you prescribe *Irradiated* Evaporated Milk for their formulae.

Then Vitamin D is provided *automatically every time the infant is fed*—in a food rich in calcium, phosphorus, and a host of other necessary nutrients.

Proved in clinical studies on thousands of infants, here is a method for providing inescapable and effective antirachitic protection.

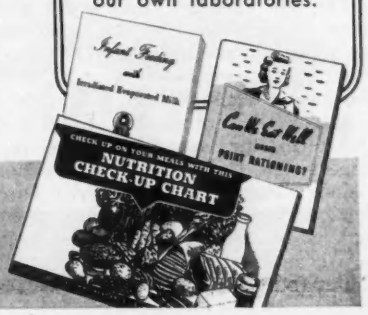
No change in your regular rickets-preventing measures is required nor suggested. The great benefits of *Irradiated* Evaporated Milk rest on the simple fact that when feeding time comes babies *always* get protective amounts of Vitamin D. Why not prescribe *Irradiated* Evaporated Milk for all your bottle-fed babies?

WISCONSIN ALUMNI RESEARCH FOUNDATION
Approved for VITAMIN D upon periodic tests

**DEPEND ON THIS SEAL**

This Seal or mention of the Foundation's name on Irradiated Evaporated Milk labels guarantees reliable Vitamin D potency. This product is tested periodically in our own laboratories.

Let us send you these three important booklets: "Infant Feeding with Irradiated Evaporated Milk," Nutrition Check-up Chart, and "Can We Eat Well Under Point Rationing?"




**WISCONSIN ALUMNI *Research* FOUNDATION**
MADISON (6), WISCONSIN

# THE DIETITIAN IN THE WOMEN'S ARMY CORPS

CAPT. EDNA L. COX, WAC, A.U.S.

*Second WAC Training Center, Daytona Beach, Florida*

The oath of allegiance in the Women's Army Corps, Army of the United States, marked the beginning of the second chapter of our history. It was in truth a welcome recognition of our pioneer efforts in the Women's Army Auxiliary Corps.

Wacs are now filling over 150 of the 628 Army Specialist positions in which enlisted men have been employed, at more than 260 Army posts, camps, and stations in the United States and overseas. The comments of commanding officers in regard to their work have been very encouraging, and the various Army services have requested over 600,000 Wacs.

CAPT. EDNA L. COX, WOMEN'S ARMY CORPS, A.U.S.

Operational assignments for WAC officers are comparatively recent, and allow us to do work formerly done only by men officers in the Army. Officers have reported to the Army Air Forces, Army Service Forces, and to the Service Commands. Mess Officers are included in this classification, and we predict their success.

The new food service program is primarily an improvement in organization and coordinates all food service activities within the Army Service Forces. It may be described as a major offensive plan with the chief objective that of food conservation. This new Food Service Section is under the Subsistence Branch of the Office of the Quartermaster General. It has 3 subsections: Bakery Supervision, Bakers and Cooks Schools, and Mess Supervision. There is a Food Service Director in each of the 9 Service Commands. The third organizational step is the Supervisor of Food Service, responsible to the Post Commander and to the Food Service Director in the Service Command.

Some of the functions and problems of the subsections will have a familiar ring as they resemble those of civil institutions. Man may not live by bread alone, but certainly the soldier depends on his share of the 45 lb. of bread allowed per 100 men. The garrison bakery holds a rather unique position in the diverse activities that make up the operational functions of an Army post. It is safe to say that the bakery is the only manufacturing establishment found on an Army post. In January 1941 there were 57 garrison bakeries in operation. The construction of many of these dated back to the last war or even to 1900. Antiquated equipment, installed in equally antiquated buildings designed on an insufficient production scale, proved entirely inadequate to meet the war demands. The construction of new bakeries has been avoided whenever possible in order to conserve materials and prevent the dislocation of civilian industry. However, the Army is now operating over 150 modern bakeries equipped with the most efficient labor-saving devices, and produced 4½ million pounds of bread in June alone, an amount which represented only 60 per cent of the bread consumed. The activities of the bakery subsection are grouped in three general classifications: bread production, bakery facilities, and personnel.

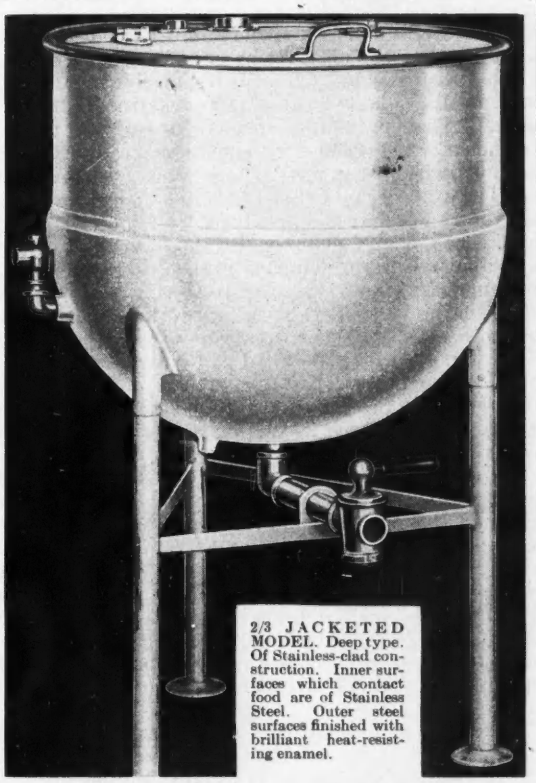
Schools for bakers and cooks have been in continuous operation in the Army since 1905. Prior to 1940, one quartermaster school for bakers and cooks was established in each of the 9 Service Commands. This number has been extended to approximately 100 and the length of the training periods at all schools has been decreased 50 per cent due to emergency demands. During the past fiscal year (1943), 131,848 officers and enlisted men were graduated from various courses in the quartermaster-operated schools for bakers and cooks. The majority of this number were enlisted men, untrained soldiers, who graduated after 2 months' training—not as chefs, but as cooks, able to turn out a satisfactory meal.

The WAC has bakers and cooks schools in all three training centers. The training time is 6 weeks—25 per cent less than that for the men. The students work the Army 24-hour shift, and attend 4 hours of class in their off-duty period. The work day begins at 11 a.m. with the preparation of the evening meal. The same group return at 4:30 a.m. to prepare and serve breakfast and the noon meal.

The students are assigned to bakers and cooks school at the Second WAC Training Center by the Classification Section. The first consideration is the desire of the individual for the training and at present we have had more requests for training than our quota allows. A score of average or better on the Army Graded Classification Test, height 5 feet 2 inches or more, and age limit of 35 years, are further requirements. Some exceptions are made for individuals with outstanding civilian experience and education. The students attend bakers and cooks school after 5 weeks' basic training.

The Second WAC Training Center bakers and cooks school has graduated 1814 bakers and cooks and 246 mess sergeants, as of September 15, 1943. Of these, 400 also finished a 1-week course in which they learned to prepare dehydrated food. An integral part of the training of cooks and bakers is the proper method of lifting, moving, and carrying so that physical fitness will be maintained and strength developed. Muscle coordination and relaxation are taught to simplify mess hall tasks.

In addition to the basic principles of nutrition and food preparation, the WAC cook learns to operate a field kitchen efficiently so that each basic company may be served in the field with due regard to sanitation, an experience which



2/3 JACKETED MODEL. Deep type. Of Stainless-clad construction. Inner surfaces which contact food are of Stainless Steel. Outer steel surfaces finished with brilliant heat-resisting enamel.

# A GROEN KETTLE

**YOUR MOST RELIABLE ALLY IN DIETETIC COOKING**

All GROEN Kettles can be had in this Stainless-clad construction. And remember... there's a GROEN Kettle for every need... standard or built to suit.

*"When Better Metals Are Made GROEN Will Use Them"*

Check the roster of America's most prominent institutions and you'll find them GROEN-equipped. That's because 50 years' service has proved you can always depend on a GROEN Kettle.

GROEN'S exclusive Ferruminating Process constructs these kettles without shallow areas or "hot spots"—thus safeguarding against scorching, and assuring uniform cooking *always*. Then, too, the GROEN Super-Jacket utilizes the entire jacketed portion of the kettle as heating area... effects quick heat transfer... produces much faster boiling... and saves fuel—features most important to the reliable performance needed for dietetic cooking.

GROEN Kettles are now working for Uncle Sam in all branches of service. But if you need a kettle, consult our Priority Division. Write today.

**GROEN MFG. CO.**
4835 W. Armitage Ave. Chicago 39, Ill.

*Half a Century of Fine Kettles*

# URINE-SUGAR TESTING NOW MADE EASY

WITH

**CLINITEST**
(COPPER REDUCTION TABLET REAGENT)

**NO FLAME**
**NO HEATING**
**NO COMPLICATED APPARATUS**
**NO WATER BATH**

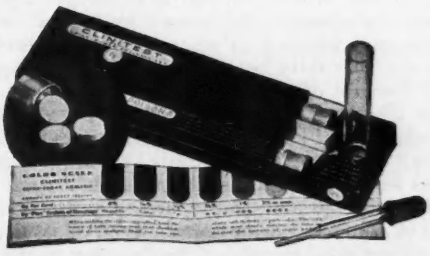
***Just do this:***
Add 1 Clinitest Tablet to proper amount of diluted urine in test tube provided. Allow for reaction. Compare with color scale.

***Simple—Isn't it?***
No powder to spill—no measuring. Test takes a matter of seconds!

**Available through your prescription pharmacy or medical supply house.**

**Write for full descriptive literature. Dept. ADA-1**

For Laboratory



For Patient

EFFERVESCENT PRODUCTS, INC.
ELKHART, INDIANA

has proved invaluable, we understand, to WAC troops now overseas.

Installations at the Second WAC Training Center field kitchen include an M 1937 Gasoline Range under a fly tent, Army Field Range #1, semipermanent field ice box, stockroom consisting of a tent over a platform, refuse disposal pit, and 2 lines for mess kit washing. Messing on railway trains and transports is another subject that must be included in the short 6-week period, and a thorough study of all U. S. Army rations now in use.

Teaching, instructor supervision, and bakers and cooks school administration are usually assigned to personnel trained in food and nutrition at the professional level.

The objective of the mess supervision subsection has been defined as threefold: elimination of waste, improvement in messing, and conservation of food. The duties of the chief of this division have been outlined in detail; the exact organization depends upon the individual post. Army camps have various systems of mess supervision. This plan, through the Food Service Program, will bring into operation a standardization of these systems, so that there will be over-all improvement in messing conditions, as well as greater conservation of food.

The Second WAC Training Center is proud of the fact that the adoption of the Food Service Program as directed by Army Service Force Circular No. 45, amounted to a change in name only. The Post Mess Office became the Food Service Section. Our system of operation had been essentially that recommended by the new program. Our activities were coordinated with those of the Post Sanitary Inspector, Post Quartermaster, Post Surgeon, Post Veterinarian, and Post Inspector so that maximum efficiency was the goal with no duplication of effort or difference in policy.

We are operating 9 mess halls, some of which are 2-line cafeterias with a capacity of 1000, and the remainder smaller organization messes. Each mess is the immediate and sole responsibility of a Mess Officer. In the past the Army often assigned mess duties in addition to other duties, usually to the newest second lieutenant; this practice is now frowned upon. The Mess Officer, also, is financially accountable for all government property in the mess. It is her duty to find a method of control that will enable the mess to operate within the 5 per cent of value allowed quarterly by Army Regulations to cover dish breakage. The Mess Officer's primary duty, of course, is the production of 3 good meals a day with a minimum of food waste. She may delegate some of her duties, but she will not delegate the final responsibility. The direct operation of the mess is accomplished through the Mess Sergeant.

Personnel problems of the mess are the responsibility of the Company Commander. The Mess Officer will often find herself in the position of an adviser and guide. Indeed, the morale of her mess may depend on her interest in the individuals over whom she has supervision. They will do their duty because of their own inner convictions and because of the Articles of War. They will do more than the letter of the law demands if the Mess Officer is a true leader. I have seen every member of a mess hall shift voluntarily stay on duty until 11 p.m. in order that their mess would pass an inspection, even though they had to return at 4:30 a.m. to prepare an early breakfast. You do not command or order that type of service—it springs only from good morale. The devotion of these women to duty far surpasses anything I have observed in civilian life.

The Mess Supervisor works with the Mess Officer and Mess Sergeant to guarantee the best possible standards of operation. Her duties are twofold: inspection and instruction. Inspection, in the Army, is relentless—there can be no excuse due to extenuating circumstances. There is no set time for inspection, and the number of officers authorized to inspect the mess seems unlimited.

The Mess Personnel Officer is responsible for the assignment of all graduate bakers and cooks to the individual messes. Their promotion in due course is also her duty. We endeavor to give every graduate baker and cook additional experience in a mess before she is sent to the field. The Table of Organization for a Field Company of 150 calls for 1 mess sergeant, 1 baker, 1 dining room orderly, and 6 cooks, one of whom is also the butcher. This plan pays dividends to the company in the field, but it adds the problem of personnel turn-over to the burden of the Mess Officer. The Personnel Officer cooperates with the Classification Section to send the right person to the field.

The importance of the Food and Nutrition Officer cannot be over-emphasized. Her work is governed by the Menu Planning Section of the Office of the Quartermaster General. This service, as you know, is headed by Mary I. Barber.

The master menu constitutes an official recommendation forwarded to all Service Commands, to be used as a guide for the purpose of: bringing about uniformity in amounts of food components issued per 100 men; demonstrating a menu that is adequate in every known factor necessary for good nutrition; offering a pattern for conserving critical food items within the national supply; giving the Office of the Quartermaster General and Service Commands definite, accurate information concerning the nutritional details of Army feeding for release to the lay public.

The master menu is written after consultation with the Requirements Section and the market centers, whose function is the procurement of perishable subsistence. The components and amounts per 100 men are listed on the menu. Included with the finished master menu are a nutritional analysis, a frequency chart, and a compilation of poundages in food groups for the purpose of comparison. Consequently, when the menu arrives at the Second WAC Training Center it is ready to be used as a guide, depending on the foods available at the market center from which we buy. The menu is adjusted to give the Wacs meals that are attractively prepared and served, nutritionally adequate, and in line with WAC preferences. For instance, women are more partial to salads and cold meals in the summer than are men. They also enjoy fresh fruits. Their consumption of sugar, as such, at the table is less than the men's but they consume more in baked products other than bread. As a rule, the amount of bread eaten is half that required by the men and the potato component 5 lb. less per hundred.

Wacs also eat less of other cereal products and the meat issue is 5 to 10 lb. less than for enlisted men. The average calorie value, too, is 1000 less than for the men. Even so, their consumption indicates a rather high caloric intake for women. The majority, however, are engaged in a rather strenuous program and undoubtedly a psychological factor also encourages this high-caloric intake.

The menu is checked for its ration point value in processed foods, meat, butter, cheese, and sugar. One month the Second WAC Training Center was short 20 points per 100 people, whereupon the menu was disapproved by the Fourth Service Command. When one can of tomato juice was taken off, the menu was approved.

The menu is analyzed in the light of food composition tables of the National Research Council and the results are checked in the Service Command.

Many times the cooks display their ingenuity in develop-

***TWICE THE THIAMIN OF WHOLE WHEAT!***

One ounce of Grape-Nuts Wheat-Meal, served with three ounces of milk, supplies the following approximate percentages* of an adult's minimum daily needs:

| | |
|---|---|
| **Protein** | **(6 gm.)—8 to 10%** |
| **Thiamin** | **(.351 mg.)—35%** |
| **Riboflavin** | **(.234 mg.)—12%** |
| **Niacin** | **(1.70 mg.)—11%** |
| **Iron** | **(1.98 mg.)—20%** |
| **Calcium** | **(125 mg.)—17%** |
| **Phosphorus** | **(170 mg.)—23%** |
| **Calories** | **157** |

**Percentages (except Protein and Niacin) based upon the minimum daily adult requirements as established by the Federal Food and Drug Administration. Protein based on 60 grams and 70 grams and Niacin based on 15 milligrams.*

***A hot breakfast... a quickie breakfast ... a really adequate breakfast is simple with delicious GRAPE-NUTS WHEAT-MEAL!***

*"Jiggers, it's cold!"* There couldn't be a better time to start the happy habit of eating a good breakfast than now when folks like something hot and sustaining to get them started. In line with this, General Foods suggests a bright new star on the cereal shelf... it's Grape-Nuts Wheat-Meal... quick-cooking, brown, appetizing, *delicious* in taste and texture.

As you go about your job of persuading our busy nation that this first morning meal should supply about ¼ to ⅓ of the day's full nourishment, remember hot, brown Grape-Nuts Wheat-Meal is an especially rich source of Vitamin $B_1$, as well as other food essentials. Served with milk, fruit, toast, and beverage, it is the basis of a delicious, adequate breakfast.

Best of all, there's plenty of yum-yum, lip-smacking delight in Grape-Nuts Wheat-Meal. And it cooks while the coffee's perking, in 3 minutes flat! Boy, what a breakfast these cold winter mornings!

***Try Hot... Brown... Quick-Cooking***

# Grape-Nuts WHEAT-MEAL

7 BASIC FOOD GROUPS ARE NEEDED DAILY FOR GOOD NUTRITION. Wheat Meal is included in... NUTRITION GROUP SIX

***OTHER DELICIOUS GENERAL FOODS CEREALS: GRAPE-NUTS, GRAPE-NUTS FLAKES, POST TOASTIES, POST'S 40% BRAN FLAKES***

ing new variations of overworked foods. Such innovations, if pleasing to the troops, are sent out on a Recipe Testing Form to every mess to be tested for a food acceptance rating. The recipes, if accepted, may then be used in the WAC master menu.

Some of our problems have very simple and seemingly obvious solutions. The handling of a beef quarter was simplified by cutting it into eighths before being issued. Substitutions for very heavy equipment, too, may usually be found. We use very few 20-gal. stock-pots compared to the number used by the men, preferring general issue 10 and 15-gal. stock-pots as well as the smaller ration (baking) pan in preference to the 100-ration pan.

The majority of officers assigned to the Food Service Section have had professional experience in food and nutrition, which obviously is an advantage. Several officers in the section have had hotel and restaurant experience.

The WAC hopes to maintain and advance the high standard they have set for themselves in mess management. The Food Service Program is a welcome challenge, and an added incentive to improve the efficiency of the organization.

## THE ARMY NEEDS DIETITIANS

MAJ. RAYMOND F. MORELAND

*Officer Procurement Service, Pittsburgh*

Representing the United States Army Procurement Service, I have been granted a few minutes to say to you what I believe to be the most important thing I have ever told a large group of people. It is simply this—the Army needs you—the Army needs you urgently, and needs you at this very moment.

When I say this I am not thinking of that huge and, by necessity, destructive and brutal killing machine. I am thinking of the thousands of sick, fearfully hurt, and broken men in the many Army hospitals today. And what of tomorrow? I think all of you know the answer to that. An incident which occurred in an Army hospital, on Monday of this week, is illustrative. Another officer and I were expressing the hope to one of the dietitians that she would attend this convention. She replied that she had planned, with another, to spend a day and a half with you but a trainload of casualties had arrived that morning and consequently their plans had to be put aside. A trainload of casualties meant in this case wounded and sick soldiers from some campaign long since completed. As they continue to arrive at these havens of hope and rehabilitation, not a bomb is exploding, not a scream of a projectile is heard here to disturb the peace and usefulness of this convention. The expectancy that the same conditions shall prevail at your next year's convention, if you have one, is good. This has been made possible by these same men.

Victory is the first order of business in America today and *your first duty* is to participate in the rehabilitation of the brave men who have assured and will continue to assure that the frightful spectre of war with all its sufferings will not set foot in our midst. One of these fighting men may be yours in one respect or another—son, brother, husband, or nephew. What would you want for him? I know the answer. You want the best doctors, best nurses, the best dietitians, and the best physiotherapists in the country to form a group representing hope and restoration, and you want them to piece together the broken threads of that man's life and restore to him health and encouragement to face the future, and the chance to fulfil the aims and desires that have been his, perhaps, since he was a small boy.

A few days ago Betty Thomas, one of your fellow dietitians from the Allegheny Valley Hospital, came to our Pittsburgh office which had processed her application for a commission. She was on her way to report for duty, and the purpose of her call was to thank Captain Reese for his assistance in getting her into the service. She was eager to do a job for which she had been trained, to which she had been appointed as a Medical Department Dietitian.

That young woman was not unduly influenced by any glamour which may be connected with the wearing of a uniform and being a part of the Army. She possessed a deep and sincere conviction that it was her duty to be a part of it. On or about December 15 she will proceed from her station to christen the destroyer that will bear the name of her brother, Lt. William G. Thomas, who lost his life in the South Pacific early this year. His ship, the light cruiser *Boise*, had successfully engaged a superior force of Japanese battlecraft and emerged literally riddled, but afloat and maneuverable, with a record of gallantry and success that won for every member of the crew a citation for heroism, and for Lieutenant Thomas, in addition, a glowing tribute in the recent book, *Pick Out the Biggest*.

I sincerely hope for your sake that the war will not touch others of you that closely, although it is not a question of how closely it touches you but what you are going to do about it.

You are a highly educated and skilfully trained group of people who alone possess one of the most essential skills needed by the Army to rehabilitate those who have fallen wounded in battle or otherwise require care. There is nothing unpatriotic about dietitians. It does not make sense that there could be. They are too thoroughly educated—they are of too high a caliber as individuals to feel otherwise and your very profession is dedicated, in the main, to public service. You have not, however, been face to face with the stark realities, the awful, frightening tragedies of total war. If this were Warsaw in 1939, Moscow or London in the fall of 1940, we of the Army would have to turn many of you away instead of imploring you to acquaint yourself with the need and come to the rescue of the men who *must* have your help. Nevertheless, while most of our women, children, and other noncombatants have been spared, and our cities are free from destruction, our soldiers are fighting side by side with men of these devastated countries to make certain once and for all of a lasting peace. Some of them are coming back to you needing, expecting, and deserving your care and attention, along with that given them by the thousands of doctors, nurses, and physiotherapists who are in this conflict, too. When we are at war your obligation to your country transcends all other obligations. And, dietitians, we *are* at war!

About four weeks ago Under-Secretary of War Patterson warned a War Department conference of industrial labor and newspaper leaders that the next year of the war would be a costly one—costly in blood and men. He added, "But it is a year that will determine the future of the war!" The picture is developing in that light and we are beginning to count the cost. Those lads who are now moulding the future have a right to a future for themselves and it is the primary duty of all of us to see to it that they are given the very best care if they return as casualties. They are depending on this country and have faith in the people they are serving and protecting.

On reflecting upon what I should say to you tonight I remembered an incident in the life of a small boy of about eight years of age as related to me by a surgeon friend. This child had had to undergo an emergency operation. The child's father was at sea on duty as an officer in the

*Use Nutritious*

# EXTENDO

*To Help Meet the Protein Shortage!*

Ingredients: Soya grits, stoneground wheat, steel cut oats, corn germ, wheat germ, hydrolyzed plant protein, primary grown dried yeast, milk powder and seasonings.

**EXTENDO is a valuable meat extender** that extends the nutritional properties as well as the flavor and the bulk of meat. Remember that it contains approximately the same essential amino acids, minerals and vitamins at a level found in meat.

**Points to Remember about EXTENDO**

1. **It makes appetizing, good-to-eat meat loaves and cakes.**
2. **It is simple and easy to use.**
3. **It is economical.**
4. **It extends meat 100%.**
5. **It saves 50% of the meat ration points.**
6. **Shrinkage is low in meat loaves and cakes.**
7. **It is a versatile and practical extender since it can be mixed with various meats as beef, pork, lamb, veal.**
8. **It helps to extend cooked (left-over) meat, chicken, fish, also eggs or cheese.**

*Here is a sample recipe indicating how EXTENDO can be used in large quantity food production.*

**EXTENDO MEAT LOAF**

15 lb. chopped beef
5 lb. EXTENDO
1 gal. liquid
10 eggs
8 (1½ lbs.) green peppers, chopped
3 c. catsup
1 oz. salt

**DIRECTIONS:**

Turn all ingredients into mixing bowl.
Mix about 3 minutes, turning from slow to moderately fast speed.
Form into loaves.
Place in greased baking pan.
Bake in moderate oven (350° F.) 1 hour.

**YIELD:**

32 lb. — raw mixture.
8 — 4-lb. loaves, raw.
8 — 3-lb. 12-oz. loaves, cooked. (only 4-oz. shrinkage.)
15 — 4-oz. portions per loaf.
120 — portions in 8 loaves.

**EXTENDO** *IS AVAILABLE SEASONED OR UNSEASONED, 22½c PER LB. IN 25 LB. SACKS, F.O.B. NEW YORK*

**EXTENDO CORPORATION**

Division of Planned Foods, Incorporated

**501 MADISON AVENUE, NEW YORK 22, N. Y.**

United States Navy and the mother was critically ill at the time. The doctor's wife, a lifetime friend, went along with the child. Her kind act may have helped but it was not apparent in the child's actions. As far as he was concerned he was alone and very much frightened. It was noted that he had something tightly clenched in his small fist and a nurse suggested that if he was holding something valuable she would keep it for him. He looked at her but said nothing and clenched his fist even tighter. On the way through the hospital corridor the physician's wife also suggested that she would take care of whatever he considered so precious, but to no avail. Later, during the anesthesia, the child's hand relaxed and from it rolled a small gold button that had been removed from his father's uniform. Through that small gold button the little fellow had the courage to face his ordeal.

Many of these wounded soldiers, much like the little child, feel alone, desperate, and very much frightened by what lies before them. They cling, just as tenaciously, to their belief that they will be properly cared for when they reach the Army hospitals. We must keep that faith.

To fill existing vacancies and those which will develop as the new hospitals open within the near future the Army needs the staggering total of 1000 more dietitians. If you hesitate, remember that the Germans and Japanese will not oblige us by delaying military action until we are completely ready to take care of the casualties. *Do now what the situation demands.* The men overseas will be doing their job and we know that you will not let them down. But remember that this is the urgent hour!

## MEDICAL DEPARTMENT DIETITIANS APPOINTED IN NOVEMBER 1943

This list of November appointments includes information, as before, in the following order: the name; the college or institution from which academic degree was received; and the civilian or Army hospital at which training was received. Appointees for whom no training course is listed have been accepted on the basis of "qualified experience."

Archer, Beulah Kalbfleisch: University of Idaho; Henry Ford Hospital.
Bang, Jennie Marie: South Dakota State College; Henry Ford Hospital.
Bass, Mildred Marie: University of Illinois; Indiana University Medical Center.
Bemis, Lois May: Framingham State Teachers College, Massachusetts; Peter Bent Brigham Hospital.
Bradford, Maxine Mary: College of St. Benedict, Minnesota; Starling-Loving Hospital, Ohio.
Broadway, Virda Estelle: University of Alabama; St. Luke's Hospital, N. Y.
Brubaker, Ruth Dale: Iowa State College; Barnes Hospital, Mo.
Charles, Virginia Ruth: Western College, Ohio.
Clark, Ann Amelia: Madison College, Virginia; Charlotte Memorial Hospital, N. C.
Duff, Mildred Lillian: Woman's College, University of North Carolina; University of Michigan Hospital.
Harrison, Eleanor Lucille: Syracuse University.
Hickman, Mary Catherine: University of Idaho; Vanderbilt University Hospital.
Hopkins, Virginia Murray: Smith College; Presbyterian Medical Center, N. Y.
Humphrey, Isabelle Allen: Seton Hill College; Jewish Hospital, Penn.
Irwin, Eleanor Jane: Kansas State College; Indiana University Medical Center.
Jubb, Ruth Anna: Michigan State College; St. Louis University Hospital.
Keefe, Doris Grace: University of Cincinnati; Starling-Loving Hospital.
Kille, Mary Frances: Florida Southern College.
Krejci, Helen Delores: University of Nebraska; Lincoln General Hospital, Neb.
Lipscomb, Mary: Winthrop College, S. C.; Vanderbilt University Hospital and Percy Jones G. H., Mich.
Long, Anna Margaret: Madison College, Va.; University of Maryland Hospital.
Mendelsohn, Rita: Brooklyn College, New York.
Morris, Zelma Clementine: West Virginia State College Institute; Freedmen's Hospital.
O'Donnell, Agnes Ruth: St. Joseph's College, Maryland.
Scholnick, Elizabeth: University of Cincinnati; Cincinnati General Hospital.
Scholttmann, Sibyl: Texas State College for Women; University of Michigan Hospital.
Shaffer, Camille Joan: Seton Hill College.
Sherman, Frieda Longley: Framingham State Teachers College; University Hospitals, Cleveland.
Siler, Margaret Vanderscoff: Miami University, Ohio.
Vlasak, Mabel Georgeann: University of Nebraska; Hahnemann Hospital, Penn.
Wallace, Jessie Lorine: Iowa State College; New York Hospital.

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*The Food Situation.* Under the direction of Senator Thomas C. Desmond, chairman of the New York State Joint Legislative Committee on Nutrition, a comprehensive picture of food prospects and problems in 1944 was drawn by government officials and food leaders at a meeting in New York on December 15. President Casey of the Independent Meat Packers Association proposed a two-week moratorium on the rationing of meat to save beef and pork products which he said were glutting every meat warehouse east of Chicago and to relieve crowded stock yards.

Roy E. Hendrickson, director, Food Distribution Administration, USDA, in a paper read by T. D. Cronin, regional director, said that the food supply for civilians in 1944 would be 15 per cent less than that asked for by the Civilian Food Requirements Branch. Butter will continue to be in tight supply, there will be less lard, and 3 per cent less per capita of fats and oils. The milk supply, too, will be lower.

Paul Wallis of the Associated Grocery Manufacturers of America said that "food is this nation's largest and most vital industry but it is the stepchild of the administration in Washington. . . . Food," he said, "is the greatest munition of war because it is the ammunition of men." Mr. Willis stated that the food industry was the first to advocate the rationing of domestic supplies. Citing the cooperation of this industry in the war program he said that when tin was denied, substitutes were found; when substitutes were denied, substitutes for substitutes were found. While we need more manpower and machines, we need less regimentation, less interference, and less contrary legislation, according to Mr. Willis. He added that our present price control system is faulty and inadequate; that three basic elements—labor, raw materials, and ceiling prices—must be brought into line.

Both Mr. Willis and Mr. Sexauer were strongly opposed to food subsidies to farmers. Mr. Sexauer appeared to favor the rationing of milk and stated that a plan for this had already been worked out in Washington. He added, "They'd better make up their minds whether they want rationing or production." In order to meet the salary level competition of industries the farmer must have higher returns for his milk and by higher returns Mr. Sexauer said that he did not refer to subsidies. "Our farmers are individualists and as such they have become the greatest food producers in the world." Mr. Sexauer remarked that unless a practical scheme was worked out, the milk supply might be reduced to 80 per cent of the amount then available to consumers.

New York's Mayor La Guardia agreed that the problem of allocation of food supplies and price control is one of the most difficult faced by this country today. He added that "you can't give a survey to a nursing baby" and that "we don't need any more statistics for the next few weeks. . . . A rationing system and price control must go together, despite the fact that this system is contrary to anything we have been accustomed to." A plan being formulated by OPA which would require invoices to be given with all meat, from the source of origin to the consumer would tend, he believed, to discourage black markets. He declared that upgrading still existed and that if there was any prime grade meat, now that range cattle are going directly to market, it was being sold to hotels and restaurants. The Mayor did not anticipate much more trouble in regulating the price of citrus fruits, as a plan was under way to sell these by the pound. "If the Government does not fix price control from the very origin or establish subsidies, the whole system of price control will break," said the Mayor. He predicted that by spring we would have a serious shortage of meat.

# How our dietary needs for NIACIN

## can be generously met with the aid of the new enrichment levels for flour and white bread . . .

In the average American pre-war diet, there was a considerable shortage of niacin (one of the important B vitamins, and essential in the diet). This shortage can be completely met through the enrichment of flour and white bread to the new Government standards, which became effective on October 1, 1943. This is clearly shown in these charts prepared under the direction of General Mills Nutrition Department.

The first chart shows that 21.5% of the recommended daily per capita allowance of niacin was not provided for in the average pre-war American diet.

The second chart shows that this same dietary can meet the recommended daily per capita allowance of niacin generously, if all flour-converted products are enriched in line with the new standards.

Through this new enrichment program, important contributions to the American diet are made also in thiamine (another B vitamin), riboflavin (vitamin $B_2$), and the food mineral, iron. The old and the new *minimum flour enrichment standards* are as follows (mg. per lb.):

| | *Old* | *New* |
|---|---|---|
| Thiamine | 1.66 | 2.0 |
| Riboflavin | None | 1.2 |
| Niacin | 6.0 | 16.0 |
| Iron | 6.0 | 13.0 |

Flour labeled "enriched" must now meet these new standards. All white baker's bread must now be enriched and must contain a minimum of these nutrients equivalent to the new standards for enriched flour.

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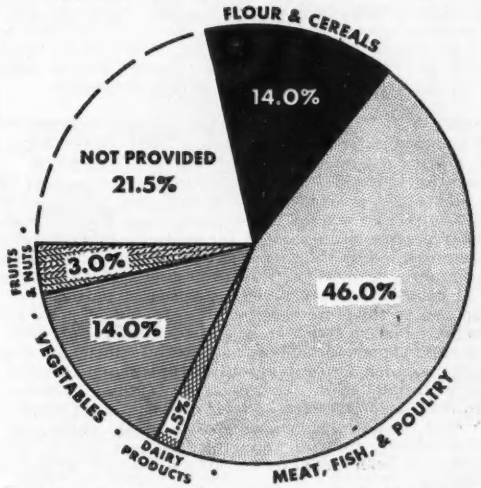
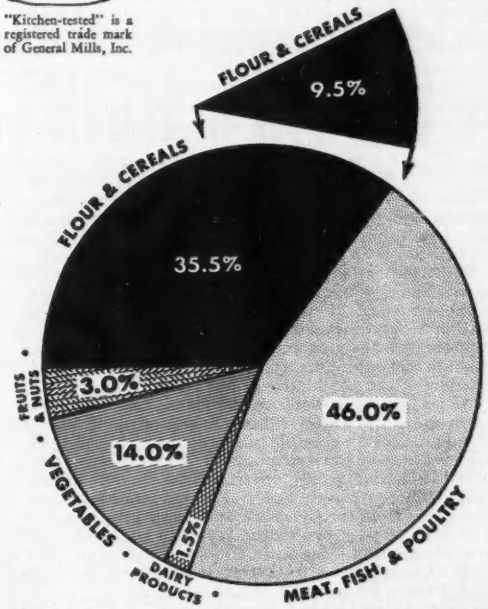



Showing percentages of the recommended daily per capita allowance of niacin contributed by various classes of foods in the average American pre-war diet; and the percentage not provided.

*The above charts are based on 16 mg. of niacin and 2800 calories (the recommended daily allowances for niacin and calories on a per capita basis). Average cooking losses of niacin have also been taken into account.*




Showing increase in percentage of the recommended daily per capita allowance of niacin contributed if all the flour-converted products in the average normal (pre-war) diet were enriched in line with the new enrichment standards. (By the enrichment of flour and bread, the niacin contained in the average American diet would be 9.5% over the total recommended. This extra allowance will compensate in part or wholly for present scarcities of certain other foods rich in niacin.)

# Book Reviews

**Food Enough.** By John D. Black. Science for War and Peace Series. Lancaster, Pa.: The Jaques Cattell Press, 1943. Cloth. Pp. 269. Price $2.50.

This is a most interesting book, packed with information about the food resources of this and other countries, but going far beyond in forward-looking discussions of the way in which the immediate and future war needs will affect present conditions and, more important, what can be done about these effects by careful planning on a national and international scale. The scope of the book is so broad that only a few of the highlights can be mentioned here.

The author is well qualified to write such a book, for he is a professor of agricultural economics, now at Harvard, a member of the Economic Panel of the Interim Commission of the United Nations Food Conference, and a former member of the Food and Nutrition Board of the National Research Council. And what may be fully as important a qualification is the fact that he was brought up on a farm and has kept in close contact with farming problems throughout the country.

Since little as yet has appeared in print regarding the objectives and plans of the United Nations Conference on Food and Agriculture, Professor Black's analysis of this meeting and its probable significance, not at some dim future date, but starting at the present time, is one of the high points of the book. His viewpoint is decidedly realistic. Throughout, he stresses the feasible rather than the ideal course of action. After a discussion of how different dietary standards must be set up in different countries, he emphasizes the futility of attempting to impose decisions as to what foods should be produced in a given country, on the part of the nations assisting in the rehabilitation. Many nations, like Greece, may want to continue to grow a comparatively small number of products for export and to import a good proportion of their total food. "Whatever rehabilitation aid is furnished must be aid that will be accepted . . . any plans for revamping the agriculture of a country must be worked out carefully with the leaders of the country, and then sold to the people who are going to use the plans." The writer also firmly believes that the easiest mistake to make is to be too liberal with aid in the rehabilitation of nations, as of individuals.

Another important point is made concerning the change in the balance between foods, diets and birth rates, and that between food, earning power and population, which must come about before it will be possible to obtain an adequate diet for all nations, for these balances have been developed through many centuries and, though not fixed, change slowly. "Let us not, then, take too lightly this assignment of obtaining an adequate diet for all nations 'in the shortest possible time.' "

Chapters on "The Foods We Need"; "The Food We Could Produce"; "The Foods We Can Afford"; and "Shifts in Consumption"; and "Shifts in Production" contain much material of interest to dietitians and nutritionists, some of it statistical, but none of it dull. One table compares the amounts of food which might be consumed per year per person on a simple low-cost diet, suggested by the author as a possible basis for determining the actual *needs* of our home population, and the 1941 "apparent consumption" of these foods. (This reviewer was pleased to note that, in the author's opinion, expressed in the chapter on shifts in consumption, though the consumer should be asked to make certain adjustments in his food habits during the next two years, "at no time, in view of the abundance of our basic grassland, will it be necessary to go the whole distance in substituting other proteins for meat proteins.") Other tables, based on a "capacity study" of the food production possible in this country, present preliminary figures on the comparative amounts of foods, in protein, fat, calories, vitamins and minerals, obtained from an acre of land on an 8-hour day. Though yields, especially on a labor basis, are much higher for crops than for livestock and dairy products, the author recognizes the importance of the latter in supplying calcium, riboflavin, niacin, and thiamin in concentrated form. The chapters on food prices and food rationing interpret some of the figures released on these subjects by USDA.

The final chapter, entitled "Food After the War," is a look into the future as far as our own country is concerned, and presents the author's thesis that it is possible to see that all groups in the population have not less than a minimum adequate diet after the war.

**Edible Wild Plants of Eastern North America.** By Merritt Lyndon Fernald and Alfred Charles Kinsey. Cornwall-on-Hudson, New York: Idlewild Press, 1943. Special publication of Gray Herbarium of Harvard University. Cloth. Illustrated. Pp. 452. Price $3.00.

This extremely enlightening and, of course, timely book is "an illustrated guide to all edible flowering plants and ferns, and some of the more important mushrooms, seaweeds and lichens growing wild in the region east of the Great Plains and Hudson Bay and north of peninsular Florida." (Many of the plants are similar and often identical with those found in various parts of Europe and in China, Japan, and other Asiatic countries.)

With the purpose of making the book as practical as possible, in the first section the authors have classified the edible wild plants according to uses, as follows: purées and soups; starchy or root vegetables, cereals, nuts and breadstuffs; cooked green vegetables; salads, nibbles and relishes; pickles; condiments and seasoning; beverages, including substitutes for tea, coffee, and chocolate; rennets; syrups and sugars, confections; fresh or preserved fruits, jellies and marmalades; table oils and butters; "masticatories" and chewing gums; emergency foods. The specific part of the plant (leaves, stems, pith, fruit, etc.) to be used, is designated and general directions for preparing and cooking are included. For each plant listed, a reference is made to the page in a later section of the book wherein it is described and in many cases illustrated, and the Latin and colloquial names of the species are given. No discussion of caloric, mineral, or vitamin values is included for, as the authors state, in most cases these are not known.

Though the number of seriously poisonous wild plants which might tempt the searcher for salad and potherbs is very limited, the authors stress the fact that they are all easily recognized by the careful observer and that *only* the careful observer should ever attempt to use any wild plant for food or try it on his friends. Accordingly, an excellent chapter is included which pictures and describes poisonous flowering plants likely to be mistaken for edible species. In the chapter on "Mushrooms, Seaweeds and Lichens" only the most deadly "toadstools" are included in the section on poisonous species, since there are many satisfactory books on mushrooms which treat all species in detail. Four familiar seaweeds are described in this chapter, and four lichens which, though not tempting in appearance, have in many historical instances staved off starvation. The illustrations in this section are especially fine. An extensive bibliography, list of illustrations, and an index of both Latin and common names of plants conclude the volume.

The factual content alone would make this a valuable book, but it is the authors' personal anecdotes and comments (much of the information, it should be noted, is based on first-hand experience and experimentation), their allusions to the literature, and their many quotations from the latter, all of which transmit to the reader their obvious enthusiasm for their subject, which make the book a highly readable treatise and a treasure for any public or private reference library of books on foods and cookery.

**100 Summer and Winter Soups.** By Ann Roe Robbins. New York: Thomas Y. Crowell Company, 1943. Cloth. Pp. 111. Price $1.25.

Soups included in this book were selected on the basis of usefulness, in view of the present limited meat supply, and good flavor. A few of the recipes are for first-course soups, but the majority are for hearty soups, filling enough for use as the main-course dish. These are presented by the author as meeting three qualifications: easy to prepare, economical, and providing "an almost endless variety of meals from very limited starting materials."

In addition to the more homely potages, such as potato chowder, vegetable chowder, fish stew, Philadelphia pepper pot, etc., we find several typical foreign-type soups and soups more unusual, made with avocados, Brussels sprouts, eggplant, and peanut butter, also a shrimp stew. Delicacies for special occasions are included, such as *Vichysoisse, boula,* and chicken almond soup. In each case, variations and substitutions are suggested, and appropriate cheese, crouton, and wine accompaniments included. All recipes have been tested by the author, and all are in family-sized amounts.

An unusual and rather annoying page make-up, in which names of soups appear only as running heads, in too-close juxtaposition, is compensated for by a very helpful index in which ingredients of soups, as well as their names and classifications, appear as separate alphabetized items. For example, under "bacon" and "ham bone" are listed the soups in which these items are used. The recipes are in good order, and together constitute a compilation which appears to be well worth the price.

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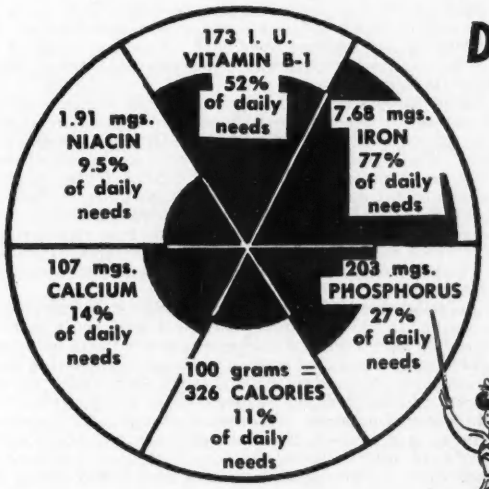


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# Current Literature

*Contributed by Helen Baughman, Janet Engebretsen and Hilda McEwen, Dietary Department, Johns Hopkins Hospital, Baltimore; Quindara Oliver Dodge, School of Home Economics, Simmons College, and Women's Educational and Industrial Union, Boston; and the Journal Staff.*

## AMERICAN JOURNAL OF THE MEDICAL SCIENCES

*Vol. 206, October 1943*

*The rapid removal of excess joint fluid by acid salts. L. Pelner.—p. 499.

**Salt-Free Diet for Hydrarthrosis.** Cases of traumatic hydrarthrosis responded well to a low-salt, acid-producing diet and adequate dosage of ammonium chloride. Strict attention was paid to keep the diet low in sodium, in fact salt-free. Edema fluid was removed from the knee via the kidneys as sodium left the body. Too few cases were studied to claim this as a new treatment for removal of effusions in the joints; it does substantiate similar studies on joint fluid in rheumatoid arthritis.

## AMERICAN JOURNAL OF PHYSIOLOGY

*Vol. 139, September 1943*

*Effects produced by vitamin D on energy, appetite, and oestrous cycles of rats kept on an exclusive diet of yellow corn. C. P. Richter and K. K. Rice.—p. 693.

*Effect of dietary changes upon urine volume and renal function in experimental diabetes insipidus. C. A Winter, W. R. Ingram and R. C. Eaton.—p. 700.

**Vitamin D.** The supplementary value of cod liver oil on an exclusive diet of yellow corn in all probability is due to the vitamin D content of the fish oil. There was close similarity between the symptoms of single food corn rats and those of hypophysectomized rats, and the possibility was considered that vitamin D might achieve its effect indirectly through stimulation of the anterior lobe of the hypophysis.

**Renal Function in Experimental Diabetes Insipidus.** In diabetes insipidus there is a deficiency in ability to concentrate sodium chloride in the urine. A similar deficiency exists with regard to nitrogenous compounds which appear to be relatively more important than the former in the maintenance of the polyuria under ordinary dietary conditions, because nitrogenous substances form the major part of the total solids of the urine. Polyuria may be markedly reduced in dogs or cats with experimental diabetes insipidus on a nearly constant chloride intake by reducing the nitrogen content of the diet, or may be exaggerated by increasing the nitrogen intake. This effect is independent of the caloric content of the diet. Polyuria parallels the sodium chloride intake even on a low-protein diet if NaCl is fed in excessive amounts, but not unless that salt is present in amount exceeding that found in ordinary diets. The polyuria varies directly with the sum of the osmotic activities of the NaCl and nitrogenous compounds in the urine. In order to reduce the polyuria of diabetes insipidus by dietary means alone, both nitrogen and salt intakes must be kept low.

## AMERICAN JOURNAL OF PUBLIC HEALTH AND THE NATION'S HEALTH

*Vol. 33, August 1943*

*Home drying methods and their effect on the palatability, cooking quality, and nutritive value of foods. E. L. Batchelder.—p. 941.

*Radio listening habits of mothers who attend well baby clinics. M. L. Murray and C. E. Turner.—p. 952.

*Surveys of the nutrition of populations. 2. The protein nutrition of a rural population in middle Tennessee. J. B. Youmans, E. W. Patton, W. R. Sutton, R. Kern and R. Steinkamp.—p. 955.

Field experience for health education personnel. M. Krueger.—p. 965.

*Dehydration procedures and their effect on vitamin retention. R. S. Hollingshead.—p. 969.

Losses of vitamins which may occur during the storage of dehydrated vegetables. D. K. Tressler, J C. Moyer and K. A. Wheeler.—p. 975.

*Vol. 33, October 1943*

*A food-borne streptococcus outbreak. V. A. Getting, S. M. Wheeler and G. E. Foley.—p. 1217.

*Illness caused by cadmium. J. J. Schiftner and H. Mahler.—p. 1224.

*Use of modern laboratory aids in the investigation of a typhoid fever outbreak. E. R. Schlesinger.—p. 1257.

**Home Drying of Foods.** Many foods can be dried in simple apparatus to form a palatable product. Retention of nutrients depends considerably on degree of control made possible by a given drier, but can be controlled to some extent by good methods of preparing for the drier. Palatability depends not only upon the drying, but on the method used for dehydration and cooking, and on the quality of the fresh material. Adverse storage conditions result in loss in edible quality and nutritive value. Home storage of dehydrated vegetables is difficult since the kinds of containers available are limited and facilities for cool dry storage are not available for many families.

**Radio Listening Habits of Mothers.** Nearly all mothers who attend well baby clinics can be reached by radio in the morning. It is suggested that the program using more than one voice should be widely used. Building an audience by posters and announcements will always be necessary.

**Nutrition of Populations.** Results of a survey of the nutrition of 1200 persons in a rural population of Tennessee with respect to protein nutrition (dietary intake, physical examination, and serum proteins) showed frequent and severe deficiencies in intake of protein in Negroes, females, and certain age groups. There was a significant incidence of protein deficiency as manifested by hypoalbuminemia. Edema was found in 3% of cases but was often explainable as due to other causes. No correlation was obtained between dietary intake of calories or protein and serum proteins.

**Dehydration Procedures.** No method of preservation will hold all of the desirable qualities of the fresh raw product. Properly prepared dehydrated foods, however, will compare favorably with any other foods available in war zones and possibly even with many so-called fresh products available in retail stores.

**Vitamin Losses During Storage of Dehydrated Vegetables.** Little carotene was lost from any of the vegetables during dehydration, but the loss was relatively rapid at storage temperatures above −40°F. Storage under carbon dioxide helped to prevent rapid loss. Some thiamin is dissolved out during hot water blanching. Subsequent storage caused no further loss. Potatoes lost nearly all of their ascorbic acid content during blanching in hot water and dehydration. Fresh beets contained relatively little ascorbic acid but one-third of this was lost during precooking and subsequent dehydration. Rutabagas lost 85% of their ascorbic acid during water blanching and dehydration. The remainder was fairly well retained at lower storage temperatures but over half was lost at temperature over 58°F. Cabbage retained its vitamin C content better than any other vegetable during dehydration and storage.

**Food-Borne Streptococcus Outbreak.** A ham-borne outbreak involved 24 cases of scarlet fever, 56 cases of septic sore throat, 7 of diarrhea, 4 of vomiting, 3 of nausea, and 8 with miscellaneous complaints. One of the hams was cooked by a woman who herself was in the early pre-eruptive stage of scarlet fever. Gastrointestinal symptoms were predominant. Laboratory analysis recorded Lancefield Group A, Griffith Type 2, hemolytic streptococci from the ground ham, from the throat of the food handler, and from the throats of 9 cases. It is possible that ham provides a medium which is most favorable for the production of the enterotoxic substance.

**Cadmium Poisoning.** Two outbreaks of acute cadmium poisoning are described in which 7 persons became ill with acute gastritis ½ to 1 hour after partaking of drinks contaminated with cadmium. The drinks were not in direct contact with cadmium-plated utensils, but were contaminated by ice cubes exposed to drippings and scalings from cadmium-plated evaporators of refrigerators.

**Typhoid Fever Outbreak.** Another outbreak of 27 cases of typhoid fever is described, 23 of which were probably due to ingestion of curd or fresh cheese at a local factory or were secondary to such cases. Two typhoid carriers were found among the dairy farmers supplying the cheese factory.

## ANNALS OF INTERNAL MEDICINE

*Vol. 19, September 1943*

*Combined hyperthyroidism and adrenal cortical insufficiency: effect of iodine therapy. L. Gittman, M. Ant and M. Jacobi.—p. 507.

*Insulin resistance (with observations in an unusual case). J. J. Schloss.—p. 533.

**Hyperthyroidism and Addison's Disease.** A rare combination of diseases is discussed because of the improvement of the clinical state and blood electrolyte pattern when treatment for only the hyperthyroid state was given. Use of sodium chloride and adrenal cortical for 12 days resulted in definite improvement. During the next 8 days, Lugol's solution was administered; then withdrawn to determine effects. Serum sodium fell and potassium rose while basal metabolic rate and cholesterol levels remained stationary

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during the period of Lugol withdrawal. Continued iodine therapy produced higher blood pressure levels, gain in weight, and a more normal electrolyte picture, hyperthyroidism probably caused a functional adrenal cortical insufficiency; the iodine administration lowered the metabolic rate and demand for cortical hormone to a level within the reserve of the gland.

**Insulin Resistance.** "Insulin resistance" should be applied to conditions which require the administration of hundreds or thousands of units of insulin per day. Absolute ineffectiveness of insulin does not occur. Causes of this phenomenon are: severe acidosis and diabetic coma, infections, diseases of liver and pancreas, pathological skin changes, and endocrine gland diseases. A case is reported of a girl from 16 years old until her death 14 years later. With each admission her carbohydrate tolerance decreased and the insulin dosage increased. At her last admission, response to insulin was negligible. During 280 days, 124,915 units insulin were given during which time 93 lb. sugar was excreted. This case is remarkable in that there were no causes for resistance to insulin; this mechanism of resistance is still not known but in any case does not indicate discontinuance of insulin administration.

## ARCHIVES OF INTERNAL MEDICINE

*Vol. 72, September 1943*

*Milestones in the diagnosis and treatment of gout. E. Neuwirth—p. 377.

*Vol. 72, October 1943*

*Relation between hepatic and plasma concentrations of vitamin A in human beings. H. Popper, F. Steigmann, K. A. Meyer and S. S. Zevin.—p. 439.

*Therapeutic observation in Cushing's syndrome. W. H. Perloff, E. Rose and F. W. Sunderman.—p. 495.

**Gout.** An excellent review of one of the oldest diseases about which there is still much to be discovered; it is still the "physicians' shame." The material presented is pertinent and readable. The general conclusion is that even the best therapeutic measures can only retard the clinical course of gout and make the patient as comfortable as possible.

**Vitamin A.** Comparisons of vitamin A concentrations in biopsy specimens of liver and plasma show that, on the average, patients' levels run parallel. Low plasma levels do not always indicate low liver levels; and values for individual subjects have no direct relationship. Moderately reduced plasma vitamin A may be brought on by varied nutritional intake or by carcinoma of the gastro-intestinal tract; great reduction is produced in hepatic damage and jaundice. Intake of huge doses of vitamin A raises concentration of plasma much more than of liver. Generally, plasma levels are a better index of functional status of vitamin A than are liver stores, although chemical assay for vitamin A and the amount of vitamin A fluorescence seen under a microscope run parallel courses.

**Cushing's Syndrome.** Mineral and nitrogen metabolism studies made under varying conditions of diet and medication were made on a Cushing's syndrome patient for a prolonged time. Possible mechanisms of the skeletal demineralization of Cushing's disease are discussed but no satisfactory explanation is available. General improvement is reported after treatment with testosterone propionate, diethylstilbesterol, calcium gluconate, and vitamin $D_2$.

## ARCHIVES OF PEDIATRICS

*Vol. 60, September 1943*

*Ethylene disulphonate in the treatment of allergic children. V. P. Wasson.—p. 511.

**Ethylene Disulphonate in Allergic Children.** Preliminary results show that among a small group of allergic patients at a municipal clinic, many seem to have benefited from the administration of ethylene disulphonate; none has shown any untoward reactions; and relief from symptoms in some instances was prolonged and is continuing. Most patients have been able to carry on normal activities, and have enjoyed an unrestricted diet. Results justify more extensive study.

## BRITISH MEDICAL JOURNAL

*No. 4307, July 24, 1943*

*Nutritional iron deficiency anaemia in wartime. L. S. P. Davidson, G. M. M. Donaldson, S. T. Lindsay and J. G McSorley —p. 95.

*The ariboflavinosis syndrome. Editorial.—p. 110.

*No. 4308, July 31, 1943*

*Malnutrition in Ceylon. Editorial.—p. 144.

*No. 4309, August 7, 1943*

*The nutritional state of staff in a London sector hospital. H. P. Wright and J. L. Hoskens.—p. 171.

*Hospital meals. Editorial.—p. 172.

*No. 4310, August 14, 1943*

*Food and health of Eskimos and Lapps. Editorial.—p. 207.

*No. 4311, August 21, 1943*

*The nutrition movement in Canada. Editorial.—p. 235.

*No. 4312, August 28, 1943*

*Vitamins and physiological function. G. N. Jenkins and J. Yudkin.—p. 265.

*Clinical biotin deficiency. Editorial.—p. 271.

*Vitamin C and cooking. Editorial.—p. 271.

*Cleaning milk bottles. Editorial.—p 272.

*No. 4315, September 18, 1943*

*Medical research in wartime. E. Mellanby.—p. 351

*Inadequate hospital diets. Editorial.—p. 365.

**Nutritional Iron Deficiency.** The hemoglobin levels of 3338 individuals in Edinburgh in 1942–43 are reported. "Clinical anemia" was found to be present in 39% of municipal-primary school children; approximately 5% of private-school children; 12% of adolescent females; 7% of adult females; 24% of pregnant women; and less than 1% of adolescent and adult males.

**Ariboflavinosis.** Certain of the manifestations originally stated to occur in the ariboflavinosis syndrome are not always associated with riboflavin deficiency and do not always respond to treatment with riboflavin. This includes cheilosis and corneal vascularization. It is suggested that there is an individual variation in the requirement of riboflavin, independent of body weight and other known factors. Lack of balance in a diet may also produce manifestations of ariboflavinosis even on a high intake. In America, a staple diet in these cases is maize while in England it is wheat and ariboflavinosis is rarely described. Deficiency of an essential amino acid might play a part.

**Malnutrition in Ceylon.** Poor stature and physique are due to dietary rather than to a racial factor. There is evidence of riboflavin and vitamin A deficiencies. The Ceylon medical officers urge that rice, the staple of the diet, be supplemented by wheat, maize, and millets; that pulses, sweet potatoes, and yams be more widely used; that more fish be sold and more milk provided for young children, with buffalo milk in the form of curd for older children and adults.

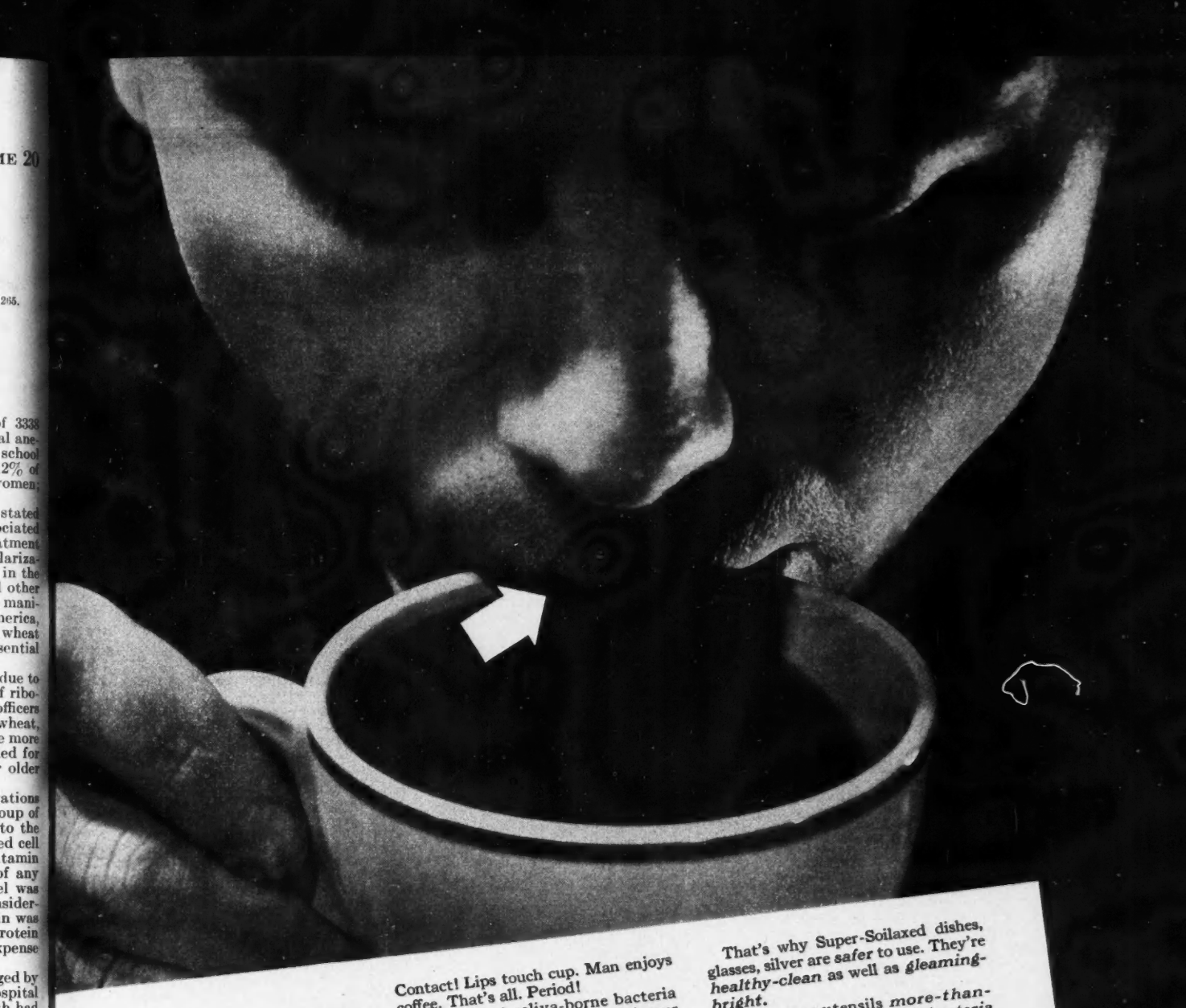
**Nutrition in a London Hospital.** The following observations upon the nutrition of 22 probationer nurses and a small group of laboratory staff at a London teaching hospital evacuated to the country show that the hemoglobin level was 88% but the red cell count did not fall below the lower level of normality. The vitamin C level of all subjects was low though none complained of any symptoms ascribable to this deficiency. The protein level was about 50 gm. daily which was too low, especially since a considerable proportion was of vegetable origin. The serum protein was relatively high but this is not unexpected for with low-protein diets short of starvation it appears to be sustained at the expense of other body proteins.

**Hospital Meals.** At a conference on hospital meals arranged by the Food Education Society, it was suggested that every hospital of over 100 beds employ a dietitian. The Minister of Health had arranged that students taking a diploma in dietetics should not be called up until the end of the training. It was also suggested that dietitians should have control not only of the special diet kitchen but of the general hospital kitchen as well. The Minister of Health did not encourage the general consumption of synthetic vitamins by people who were or should be in a position to obtain a properly balanced diet.

**Food for Eskimos and Lapps.** Eskimos of Northern Greenland still lead primitive existences. Their diet, entirely carnivorous, consists of the fresh glandular organs and often entrails (usually raw) of arctic mammals, birds, and fish. The Labrador Eskimos now eat dried potatoes, flour, tinned goods, cereals, and cooked meats. As a result, scurvy, rickets, and a combination of the two are universal and severe. The Lapps have also added cereals and given up the use of reindeer milk and 50% of the children have rickets. Severe dental caries is also common. The diet does not easily lend itself to dilution with the energy foods of civilized man.

**Nutrition in Canada.** The Nutrition Services Division organized in November 1941 under the directorship of Dr. L. B. Pett, placed special emphasis upon the requirements of war workers. It is a central clearing house of information on nutrition with provincial committees serving as the link between Ottawa and the community nutrition committees. Lectures and study groups are stressed as well as posters, radio, and cooperation of retail stores and restaurants. These activities may serve as a guide for similar work in England.

**Vitamins and Physiological Function.** A group of 178 children aged 11 and 12 were examined after half of them had received vitamin supplements daily for one year. The supplements provided each school day 5000 I. U. vitamin A, 1 mg. thiamin, 25 mg. vitamin C, and 500 I. U. vitamin D, the average addition over the year being one-half the reputed daily requirements. No



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difference was observed between the control group and the supplemented groups in resting pulse rate, vital capacity, breath-holding, or 40 mm. endurance test. However, this may be due to the fact that the subjects were not deficient before the administration began.

**Biotin Deficiency.** Avidin, a protein in raw egg white, may unite with biotin to form a complex and prevent its absorption. This produces a deficiency syndrome in rats and Sydenstricker and his colleagues have demonstrated that they were able to induce biotin deficiency in human beings by the administration of large quantities of raw or dried egg white. The vitamin has now been synthesized and further investigation of its function in human nutrition can be carried on.

**Vitamin C and Cooking.** Of common home-grown fruits, black currants and strawberries contain more vitamin C than oranges and lemons. Potatoes contain 16 mg. ascorbic acid per 100 gm. when dug in August and only 2 mg. per 100 gm. by March.

**Cleaning Milk Bottles.** A study of methods now in use for cleaning and sterilizing milk bottles suggests that the use of detergents such as caustic soda is preferable to steam sterilization but contamination may come from the rinsing water. This could be overcome by following rinsing with hot water and by external washing only with recirculated cooling water and a final rinse, both external and internal with a cold spray direct from the main. The need for cooling bottles before filling would of course be removed were milk pasteurized in the bottle.

**Medical Research.** In connection with food and nutrition in this review, many of the teachings that have been urged for the past 20 years have now been adopted. This includes increased consumption of milk by infants and children and by pregnant and nursing mothers, also the increased consumption of potatoes and other vegetables and the use of bread made from high extraction flour. Some further improvement in the calcium content of bread had been made recently by the addition of 2 lb. dried separated milk to 200 lb. flour.

**Inadequate Hospital Diets.** It is now realized that the hospital kitchen is at least as important as the hospital dispensary and a number of hospitals are employing dietitians. The job of the dietitian should be to plan the dietary as a whole to meet nutritional standards prescribed by the medical staff.

## BULLETIN OF THE JOHNS HOPKINS HOSPITAL

*Vol. 73, September 1943*

*Electrocardiographic changes associated with thiamine deficiency in pigs. M. M. Wintrobe, R. Alcayoga, S. Humphreys and R. H. Follis, Jr.—p. 169.

*Vol. 73, October 1943*

*Effect of amphetamine (benzedrine) sulfate upon higher nervous activity. E. B. Alpern, N. Finkelstein and W. H. Gantt.—p. 287.

**Thiamin Deficiency in Pigs.** Cardiac abnormalities form an important part of the syndrome of beriberi. Basal diets adequate in all constituents except thiamin were fed to pigs. Bradycardia of pronounced degree occurred, and heart rate fell in thiamin-deficient animals. There was a prolonged conduction time and the electrocardiograph waves became higher and broader with an inversion of the T wave. Other symptoms of deficiency such as shortness of breath and staggering movements appeared, and a high blood pyruvic acid content. Electrocardiographic changes are probably the expression of a disturbed metabolism caused by lack of thiamin.

**Benzedrine Effect on Nerves.** Benzedrine has been used widely as a cerebral stimulant; results are reported concerning nervous activity. Amphetamine sulfate administered to dogs produced a moderate decrease in the intensity of unconditional reflexes to food, sexual stimuli, and pain. Such effects were detected one-half hour after administration and lasted up to 6 hours. "Amphetamine (benzedrine) sulfate increased the conditioned secretion relative to the unconditioned secretion to food"; thus it can be termed a stimulant of the nervous system.

## FOOD RESEARCH

*Vol. 8, September-October 1943*

*Home practices and the nutritive value of fruits and vegetables. J. I. Simpson.—p. 353.

*Palatability studies of commercially dehydrated vegetables. F. Fenton and H. Gifft.—p. 364.

*Effect of extremely low rates of heat penetration on tendering of beef. S. Cover.—p. 388.

*Changes occurring in fruit juices during storage. H. G. Beattie, K. A. Wheeler and C. W. Pederson.—p. 395.

*Thiamin content of fresh and frozen peas and corn before and after cooking. B. Barnes, D. K. Tressler and F. Fenton.—p. 420.

**Home Practices and Nutritive Value of Fruits and Vegetables.** This is a review of the literature which shows that the nutritive value of fruits and vegetables can be altered materially by home procedures, the extent of which differs greatly according to the method used. The effect of home storage on the content of certain vitamins, too, varies greatly according to the time and temperature of storage and also according to the sample itself. Some operations preliminary to cooking have been found to be very wasteful of nutrients, whereas others have been found to cause not so great losses as have been assumed in the past. Discarding the skins of some fruits and vegetables has been found to cause serious loss of nutrients, whereas in other cases the loss has not been great. The leaves of various greens have been found to be so much higher in iron than the stems, that it has seemed possible to discard the stems without incurring large iron losses. Also, the upper part of broccoli and rhubarb stalks has been found to be considerably more valuable as a source of ascorbic acid than the lower part. Losses in nutritive value which occur in cooking fruits and vegetables vary widely according to the degree of "doneness" as well as the method of cooking. An extensive and excellent list of references is appended.

**Palatability of Dehydrated Vegetables.** The effect of storage conditions on dehydrated cabbage, beets, and rutabagas was more noticeable in the uncooked than in the cooked vegetables. The palatability of cooked, unblanched, dehydrated cabbage was markedly affected when stored at 14 and 24°C. (57.2 and 75.2° F.) for 5 months. Storage conditions affected the palatability of cooked, dehydrated rutabagas in respect to color, mainly, and flavor, slightly. Storage temperatures brought about more noticeable differences than did the method of packaging. Only beets, of the 3 vegetables studied, could be stored at ordinary room temperatures for 5 months without loss of palatability. The initial temperature of water, 20, 80, and 98° C., in which beets, cabbage, potatoes, rutabagas, and yellow turnips were soaked or cooked had very little effect on the amount of water reabsorbed or on the palatability of the cooked vegetables. Unblanched, dehydrated cabbage started in boiling water retained 71% of its vitamin C; that started in cold water retained only 43%. The effect of length of the refreshing period upon amount of reabsorption varied with the vegetable. In the case of cabbage and potatoes the increase was relatively small. Beets soaked for one-half hour before cooking absorbed more water than did those cooked with no soaking, but further increase in absorption was slight in beets soaked as long as 7 hours. The amount of water absorbed by rutabagas and yellow turnips increased gradually with an increase in refreshing time. Unblanched, dehydrated cabbage put in cold water and cooked after zero, 30, and 60 minutes of soaking retained 28, 19, and 7% of its vitamin C; the destruction was 60, 78, and 90%, respectively. Long soaking resulted in water-soaked vegetables, loss of flavor, and often loss of color.

**Tendering of Beef.** Paired roasts from 3 cuts, cooked well-done and one cut rare at oven temperatures of 80 and 125°C. (176 and 257° F.) were tested for tenderness by the paired-eating method, weighted adjectives, and the Warner-Bratzler shear. Roasts were uniformly tender when the rate of heat penetration was slow enough so that it required 30 hours or more to lose the pink color. With less time the roasts were not always tender. Well-done roasts from the 80° C. oven were not plump although their internal temperatures had reached 70° C. (158° F.), high enough for the heat to have contracted the collagen. The large amount of connective tissue in well-done bottom-round roasts cooked at 80° C. appeared to be completely changed from its hard and tough state to a moist, viscous mass which, while warm, was without resistance to either the knife or the teeth. It appears that there are two structures in meat which contribute to its toughness, muscle fiber and connective tissue.

**Storage of Fruit Juices.** Processed strawberry, raspberry, and currant juices contain appreciable amounts of ascorbic acid which progressively decrease during storage and more rapidly at higher storage temperatures. The red and yellow colors are reduced, the former at about the same rate at which ascorbic acid is destroyed. After the initial loss of yellow color its intensity is increased. Differences in temperature of pasteurization or in method of extraction have shown little effect upon the changes occurring during storage. The presence of air causes a marked increase in destruction of ascorbic acid and has some effect upon the change in color. Since ascorbic acid is oxidizable and pigments are reducible, the results suggest that they may react with each other.

**Thiamin Content of Frozen Peas and Corn.** Fresh peas did not lose thiamin when held for 5 hours, shelled or unshelled, at room temperature, nor did fresh, unhusked corn. Cooked, frozen peas are a fair source of thiamin. Storage of frozen peas and corn at −17.8 to −23.3° C. (0 to −10° F.) for one year did not result in a loss of thiamin. There was no loss of thiamin during the cooking of fresh and frozen peas and corn. Increasing the amounts of water used in cooking peas and corn, however, caused an increase in the amount of thiamin dissolved in the cooking water.

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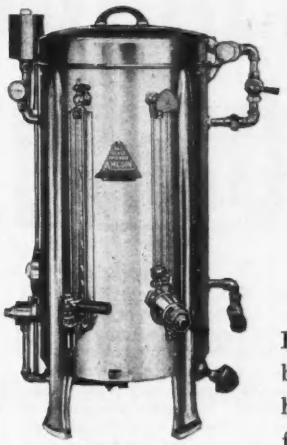

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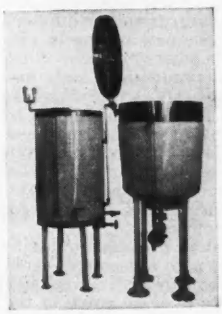

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## JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

*Vol. 123, October 9, 1943*

*Handbook of nutrition: XXIV. Nutrition in preventive medicine (concluded). W. H. Sebrell.—p. 342.

*Vol. 123, October 16, 1943*

*Calcium pantothenate for human achromotrichia: lack of value on prolonged administration. I. Kerlan and R. P. Herwick.—p. 391.

*Food rationing in wartime: recommendations of the National Research Council. Medicine and the war.—p. 422.

*Vol. 123, October 23, 1943*

*Interrelationship of ascorbic acid and thiamine. Current comment.—p. 486.

*Smallpox vaccination. Current comment.—p. 486.

*Health of the armed services. Medicine and the war.—p. 487.

*Vol. 123, November 6, 1943*

*American health resorts: rest, exercise and dietary regulation in the spa regimen. M. B. Jarman.—p. 631.

*Scope of council. Council on foods and nutrition.—p. 635.

*Vol. 123, November 13, 1943*

*The biosynthesis of thiamine in man and its implications in human nutrition. V. A. Najjar and L. E. Holt, Jr.—p. 683.

*Hypertension in military service. Editorial —p. 702.

**Nutrition in Preventive Medicine.** The characteristics and incidence of thiamin and nicotinic acid deficiencies, ariboflavinosis, vitamin C and K deficiencies, and nutritional anemia are discussed, along with consideration of the nutrition program now in effect which is designed to combat these deficiencies. Dr. Sebrell states that: "Although poverty is the principal cause of malnutrition, general economic improvement will not give everyone an adequate diet. Faulty food distribution is the most important contributory factor, and ignorance of the rules of good diet, plus indifference to the consequences, and bad dietary habits are the contributory underlying causes. From the point of view of preventive medicine the problem of adequate nutrition is so different from other health problems that it requires a new approach. Its ramifications extend far into our whole economic structure. Such diverse problems as the control of crop production, farm machinery, manpower, food distribution, transportation, food preservation and processing, storage and food preparation, as well as nutrition education and the diagnosis, prevention, and treatment of deficiency diseases are all involved. It is obvious that problems of this range and magnitude cannot be solved by physicians, health officers, or any other one agency alone. The first essential is close cooperation and intimate relations among a number of agencies, including physicians and health officers."

**Human Achromotrichia.** Close observation revealed no significant change when 20 mg. calcium pantothenate was administered daily for 6 months to 27 white men and women with graying hair. It is concluded that calcium pantothenate is of no value in the restoration of color to gray hair.

**Food Rationing in Wartime.** It is recommended that "authority for certification of patients be restricted to persons licensed to practice medicine and surgery in their respective state." Varying periods of validity for certification for extra rations are recommended. "Recognizing that many patients would benefit by and would welcome advice on how most intelligently and economically to use their ration points, the subcommittee recommended that an invitation be extended to the American Dietetic Association to assist the local ration boards in a voluntary advisory capacity. In response to this request the Diet Therapy Section of the American Dietetic Association, through its chairman, Dorothea Turner, has expressed willingness to cooperate in such a capacity." Consideration should be given to the availability of unrationed foods which may, in part or in full, be substituted for dietetically equivalent rationed foods. The prescribing physician should bear in mind that there are excellent sources of protein other than meat, notably legumes. "To be eligible to receive any supplementary allowances of rationed foods, the patient with diabetes mellitus must surrender his sugar ration. Patients with active tuberculosis should receive not more than 56 oz. processed citrus fruit and tomato juices per week in addition to their ordinary allowance of processed fruits and vegetables, and the following allowance of meats, including fish and poultry, eggs, milk, and fats and oils per week: meats, including fish and poultry, 64 oz.; eggs, 7; milk, 7 qt.; fats and oils, including butter and margarine, 13½ oz. If these amounts are not available from rationed foods together with unrationed food procurable by the patient, sufficient supplementary points should be allotted to provide them." The rationale for a high-protein diet in nephrotic nephritis, cirrhosis, and hepatitis may be disputed; many physicians will prefer to prescribe otherwise, but there is an increasing body of scientific evidence to substantiate that patients with the nephrotic type of chronic nephritis, cirrhosis of the liver, severe hepatitis and chronic ulcerative colitis be allowed a maximum of 7 lb. meat (including fish and poultry) per week. "A diagnosis of chronic ulcerative colitis should not be recognized unless certified to by 3 physicians and that certification must be renewed every 4 months and may be authorized by one physician. The importance of maintaining a positive nitrogen balance to favor wound healing and tissue repair has been conclusively demonstrated; likewise, that there is a large and significant loss of nitrogen in the pus from profusely draining lesions. Adequate replacement of this loss may be of critical value. Provisions for patients with chronic suppurative processes, especially empyema, osteomyelitis, extensive suppurative lesions of soft parts, subcutaneous tissue or muscle, and those infections in which there is profuse pus formation, may need to include, per week, meat, including fish and poultry, 64 oz.; milk, 7 qt.; eggs, 7. Patients with sprue may need up to 7 lb. lean meat including non-fatty fish and poultry and from 14 to 21 qt. milk per week.

**Interrelationship of Ascorbic Acid and Thiamin.** It has been demonstrated that rats are able to synthesize adequate amounts of ascorbic acid. The ascorbic acid content of their tissues is maintained at a normal level in spite of complete lack of ascorbic acid in the diet and apparently is dependent on an adequate intake of certain other vitamins, chiefly thiamin and riboflavin. More recently it has been demonstrated that ascorbic acid will prevent or cure certain secondary manifestations of thiamin deficiency in dogs. This is a striking extension of the known facts of vitamin interrelationships to a second animal species with suggestive bearing on problems of human nutrition.

**Smallpox Vaccination.** Recently a death from tetanus followed smallpox vaccination. An investigation of the circumstances surrounding the vaccination and subsequent management of the case revealed that two commercially-made adhesive gauze bandages containing sulfathiazole had been applied over the site of vaccination and left in place. Now that ready-made bandages are in every medicine cabinet there is a tendency to apply dressings to all abrasions. Admirable as such practice may be for some types of lesions, it is to be severely condemned when the fixed dressing is applied to a vaccination site. Dressings of this character tend to retain heat and moisture, thus favoring the rupture of the vesicle and the formation and retention of pus and necrotic material, ideal for anaerobic growth.

**Health of the Armed Services.** Dysenteries and diarrhea, including food poisoning, are the Army's second greatest disease threat in number of cases among overseas troops. At least one outbreak was attributed to "faulty housekeeping." In this connection it was pointed out that the methods of dishwashing used in homes would be totally inadequate in camps. Dish towels are forbidden both because of possible contamination through the cloth and because "wiping" can cover up inadequate washing. The length of time dishes must be washed and the temperature of the water are a matter of Army regulations. All dishes must be washed "not less than 40 seconds in water of 140°." Garbage cans must be kept covered, cleansed daily, and may not be emptied from one container to another. Instead, cans are loaded on trucks, hauled to the compost and emptied there, cleansed and then returned. It is forbidden to whitewash the cans, because they might thus give a deceptive appearance of cleanliness and so might not receive a thorough scrubbing.

**Spa Regimen.** The therapeutic measure most frequently advised by physicians is rest. A thought uppermost in the minds of patients who go to spas—and one about which there is much confusion—centers around matters pertaining to diet. For the 10 to 20% of normal persons who go to spas the diet should be that for normal persons under similar conditions of activity elsewhere. For the 25% who suffer from arthritis the diet should be that adapted to the individual needs of the same type of arthritic patient whether he is at a spa or elsewhere. For the undetermined but large number of people at spas who are overweight, control of diet is by far the most important consideration. For that other large group of patients of spas—patients suffering from cardiovascular diseases—the diet, for the most part, is directed toward the control of weight. In some cases the intake of fluids and mineral salts has to be taken into account. A spa organized for the care of such patients usually provides physicians capable of guiding them in such matters. For the remaining third of patients who go to spas the diet should be adjusted to the individual needs of each patient. In the well-organized spas this usually can be done. "Dietary fads should not have any place in the regimen of a spa."

**Scope of Council on Foods.** For some time the Council has had under advisement the question of limitation of its scope of activities. Various reasons have operated to cause this, but the most cogent one has been the passage of the Food, Drug and Cosmetic Act, and the continued advance which the Food and Drug Administration has been able to make under this act in establishing standards of identity for various foods and rules regarding the labeling of them. The Council has voted to restrict the use of

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**Biosynthesis of Thiamin.** The thiamin requirements of man are not known with accuracy. The daily allowances recommended by the National Research Council were based on 3 experimental studies of induced thiamin deficiency in human volunteers which did not show very close agreement in regard to the minimal requirement. The difficulty in experiments of this kind is the great variation in the thiamin content of natural foods, making it next to impossible to maintain a constant intake when such foods are given. In order to avoid this difficulty and to control thiamin intake accurately, experiments were undertaken on a synthetic diet in which vitamins were supplied exclusively by a vitamin mixture given with each meal in weighed amounts. The subjects, 9 adolescent and young adult males, 16 to 23 years of age, were living a sedentary life in an institution. Their diet, in quantities approximating 40 calories per kilogram, consisted of vitamin-free casein, Crisco, dextrimaltose, a mineral and a vitamin mixture, mixed to form a somewhat granular dough and given in equal quantities at each of the 3 meals. The subjects soon became accustomed to this food and ate it with every appearance of relish. In all, this monotonous regimen was continued for 18 months during which time weight and vigor were maintained. During the course of many months the thiamin intake was gradually reduced without the appearance of any clinical or laboratory evidence of thiamin deficiency. Eventually, when the subjects had remained on thiamin intakes between 0.1 and 0.2 mg. per day for months, thiamin was omitted altogether from the diet. In the course of the next 3 to 5 weeks, 4 of the 9 subjects developed definite clinical evidence of thiamin deficiency (neuritis or edema, in association with anorexia and sometimes vomiting); one other subject developed questionable evidence (anorexia and vomiting only), and the remaining 4 subjects showed no signs of deficiency during a 7-week period of observation. Since it seemed likely that the reserves of thiamin had been greatly depleted by the prolonged period of low intake even before the completely thiamin-free regimen was instituted, it would have been anticipated that none of these subjects could withstand complete withdrawal for more than a few weeks. An explanation was therefore sought for the failure of the remaining 4 subjects to develop deficiency. Repeated examination of the stools, however, provided very illuminating information. It was found that the 4 subjects who had developed deficiency had almost no free thiamin in their stools. A somewhat larger amount of free thiamin was present in the subject whose symptoms were questionable, whereas each of the subjects who remained free of symptoms had large quantities of free thiamin in the feces.

**Hypertension in Military Service.** There is no clear-cut line of delimitation between the normal person who shows occasionally an increase in blood pressure under various influences and the borderline hypertensive patient. Essentially the two represent different degrees of the same conditions. An uncomplicated mild hypertension is compatible with a high degree of physical activity and need not be a cause for rejection.

## JOURNAL OF BIOLOGICAL CHEMISTRY

*Vol. 150, September 1943*

*The effectiveness of a mixture of arginine, glycine, and cystine in the prevention of the so-called vitamin $B_4$ deficiency in the chick. G. M. Briggs, Jr., T. D. Luckey, C. A. Elvehjem and E. B. Hart.—p. 11.

*The role of riboflavin in blood regeneration. H. Spector, A. R. Maas, L. Michaud, C. A. Elvehjem and E.B. Hart.—p. 75.

*The diet of hens and the vitamin A potency of their eggs. H. J. Almquist, G. Mackinney and E. Mecchi.—p. 99.

*The utilization of lactose by the fasting white rat. M. N. Coryell and A. A. Christman.—p. 143.

*Vol. 150, October 1943*

*Ferritin. VI. Conversion of inorganic and hemoglobin iron into ferritin iron in the animal body. Storage function of ferritin iron as shown by radioactive and magnetic measurements. P. F. Hahn, S. Granick, W. F. Bale and L. Michaelis.—p. 407.

*The role of carboxyl-labeled acetic, propionic, and butyric acids in liver glycogen formation. J. M. Buchanan, A. B. Hastings and F. B. Nesbett.—p. 413.

*The mechanism of cozymase synthesis in the human erythrocyte: a comparison of the roles of nicotinic acid and nicotinamide. P. Handler and H. I. Kohn.—p. 447.

**Vitamin $B_4$ and Amino Acids.** It was found that a mixture of arginine, glycine, and cystine, when fed in a vitamin $B_4$-low ration to chicks, promotes good growth and prevents typical paralysis.

**Riboflavin in Blood Regeneration.** Food consumption was poor and irregular on a diet deficient in riboflavin and typical symptoms of a deficiency of riboflavin were observed in the dogs. A mild anemia developed on a synthetic ration without riboflavin and a severe anemia was readily induced with slight bleeding. The dogs cannot recover from this anemia unless riboflavin is fed. In the absence of riboflavin a microcytic, hypochromic type of anemia was produced.

**Diet and Vitamin A of Eggs.** Carotene is efficiently converted into vitamin A by the hen. Equivalent practical dietary levels of vitamin A potency, in the form of carotene or of vitamin A, lead to an equivalent deposition in the egg of vitamin A potency which is almost exclusively in the form of true vitamin A.

**Lactose Utilization.** Glucose made available by the hydrolysis of lactose was absorbed as rapidly as it was formed, while the galactose was absorbed at a somewhat slower rate. A simultaneous study of liver glycogen of rats fed lactose indicated that the amount of glycogen deposited corresponded roughly to one-third of the glucose and galactose absorbed. Results indicate that lactose may be a relatively good glycogen former.

**Ferritin.** It is concluded that ferritin iron acts in the capacity of storage iron in the animal body.

**Glycogen Formation in Liver.** Evidence is presented which indicates that propionic and butyric acids are converted to liver glycogen, but that acetate is not.

**Cozymase Synthesis by Erythrocytes.** Simultaneous nicotinic acid and V factor analysis of human erythrocytes after ingestion of nicotinic acid or its amide, and after *in vitro* incubation, indicates that the amide is, at best, one-third as potent as the acid in stimulating cozymase synthesis. The human erythrocyte is freely permeable to both nicotinic acid and nicotinamide. The enzymatic decomposition of cozymase after hemolysis appears to proceed *in vitro* in the same manner observed with rat tissues. It is concluded that the synthesis of cozymase by the human erythrocyte is not accomplished by reversal of the events in decomposition.

## JOURNAL OF PEDIATRICS

*Vol. 23, October 1943*

*An evaluation of the blood and urinary thiamine determinations in vitamin $B_1$ subnutrition. R. A. Benson, C. M. Witzberger and L. B. Slobody.—p. 437.

**Vitamin $B_1$ Subnutrition.** The blood determination of thiamin is of no value in diagnosis of vitamin $B_1$ subnutrition. Thiamin urinary excretion studies are useful for this purpose.

## MILBANK MEMORIAL FUND QUARTERLY

*Vol. 21, October 1943*

*Medical evaluation of nutritional status. Part XIV. Neuromuscular response to galvanic current as a guide to the adequacy of the calcium nutrition of adolescents. G. W. Beebe.—p. 311.

**Nutritional Status.** Calcium is believed to be one of the more prevalent deficiencies in the American diet, but no simple, sensitive test is available for the diagnosis of early or mild manifestations of calcium deficiency. Because of the great importance of adequate or optimal calcium intake for health, this lack of a practical diagnostic method for routine examinations is a significant gap in the new science of diagnosis of mild or subacute deficiency states. In an investigation of the nutritional status of several thousand adolescents in New York City, which emphasized the evaluation of various methods which have been suggested for diagnosis of mild deficiencies, a test for the neuromuscular response to galvanic stimuli was included to study its value in detecting mild calcium deficiency. The conclusion is reached that this study furnished no evidence that the neuromuscular response to galvanic stimulation provides a satisfactory basis for appraising calcium nutrition of groups of adolescents.

## PUBLIC HEALTH NURSING

*Vol. 35, September 1943*

*The nutrition of the school child. A. F. Morgan.—p. 497.

**Nutrition of School Children.** The danger of damage to health and efficiency through poor feeding is likely to increase during the next year or two. For children this is crucial. A relatively short period of deprivation may produce permanent disabilities which

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the most lavish subsequent feeding cannot eradicate. Prevention first, cures if possible, is the watchword for nutrition. The most efficacious place and time for such preventive measures are found in the schools. Studies have proved the value of supplementary feeding. Poverty increases the hazards of ignorance. The first limiting factor in growth of the poorest group of children studied was the total amount of food and until this lack was met no further improvement could be obtained by use of protective foods. The Oslo breakfast and the use of surplus foods for free school lunches are commended. New nutritional status studies are more involved and require additional staff and skills. Nutrition education must not be neglected but must be aimed at child, parent, and teacher. The public health nurse has an excellent opportunity for nutritional education and so should be well grounded in knowledge and techniques.

## SCIENCE

*Vol. 98, September 3, 1943*

*Prevention of oral lesion in $B_1$ avitaminotic dogs. W. M. Govier and M. E. Greig.—p. 216.
*Cacao and other food crops grown in El Oro province, Ecuador. Science News.—p. 12.
*Health during the war. Science News.—p. 12.

*Vol. 98, September 10, 1943*

*Protein from corn germ. Science News.—p. 10.

*Vol. 98, September 24, 1943*

*Need for water-insoluble forms of water-soluble vitamins. F. L. Gunderson.—p. 277.
*Observations on the biological value of a mixture of essential amino acids. A. A. Albanese and V. Irby.—p. 287.

*Vol. 98, October 1, 1943*

*The diet of Chinese soldiers and college students in wartime. T. Shen.—p. 302.
*The ether-soluble fraction of navy beans and the digestion of starch. D. E. Bowman.—p. 308.

*Vol. 98, October 8, 1943*

*Food for Italy. Science News.—p. 10.

*Vol. 98, October 15, 1943*

*Butter ration value. Science News.—p 12.

*Vol. 98, October 22, 1943*

*Protein concentrates from grasses. J. T. Sullivan.—p. 363.
*The natural occurrence of riboflavin deficiency in the eyes of dogs. T. D. Spies.—p. 370.
*Tropical guava shrubs. Science News.—p. 10.

**Prevention of Oral Lesion in $B_1$ Avitaminotic Dogs.** Many dogs with $B_1$ avitaminoses developed necrotic erosions beginning around the teeth and sometimes extending around the lower jaw. When B complex vitamins were supplied, the lesions still occurred. It was not until 10 mg. ascorbic acid twice weekly with other vitamins was given by stomach tube that the lesions promptly healed and no more appeared.

**Cocoa and Chocolate from Ecuador.** Cocoa, chocolate, and other cocoa products for the U. S. may soon be obtainable in increasing quantities from Ecuador in equatorial South America. Other tropical and semitropical products which formerly came from the Far East, may now come from the Western Hemisphere because of projects sponsored by the Office of the Coordinator of Inter-American Affairs.

**Health During the War.** According to the statistics of the Metropolitan Life Insurance Company the 1942 mortality rate was the lowest ever recorded. Aside from mounting war deaths the only other unfavorable features are the higher-than-ever-before death rates from cancer, cerebral hemorrhage, and diseases of the heart and arteries. American women, now playing an important role in war production, are healthier than ever. Married people live longer.

**Protein From Corn Germ.** A process has been devised for defatting corn protein in the germ or unsprouted plant tucked in the corn grain which at present is used principally as animal feed because of the tendency of corn germ to turn rancid quickly. Feeding experiments show that defatted corn germ contains 21% protein which is 85% as digestible as beef protein and with a biological value quite as high. It is also rich in several vitamins, has a high mineral content with the exceptional figure of 300 parts per million of iron.

**Water-Soluble Vitamins.** The practical enrichment of corn grits and white rice with certain vitamins would be greatly facilitated if insoluble forms of thiamin, riboflavin and niacin were available since these foods are often subjected to rinsing before cooking.

**Essential Amino Acids.** A mixture of "essential" amino acids fed to rats was found to be inferior from a nutritional point of view to enzymatic or acid casein hydrolysates or casein fed at comparative levels. Evidence suggests that the nutritive inadequacy may be due in part to toxic effects of unnatural forms of certain amino acids that cannot be utilized.

**Diet of Chinese Soldiers and College Students in Wartime.** The diet of the Chinese soldier for a day consists of 953 gm. rice, 274 gm. leafy vegetables, 10 gm. fat and 13 gm. salt. This ration probably provides enough calories, enough protein, nearly all from rice, less than 3% of calories as fat. It supplies sufficient iron, barely enough calcium, and too much phosphorus. Vitamin A is obtained as carotene from the vegetables, also vitamin C. Incidence of vitamin B deficiency is higher in groups using polished rice. The Chinese college students have a slightly more varied diet including tubers and roots and 68 gm. meat and eggs. Subclinical cases of vitamin C deficiency are apparent even among the college students. Almost no sugar is allowed the Chinese soldier.

**Digestion of Navy Beans.** The oil of navy beans retards the digestion of soluble starch by pancreatic amylase *in vitro*. The retarding influence of the bean oil can be overcome to a large degree by treatment with yeast.

**Food for Italy.** The Allies will have to help feed the Italians until the 1944 harvest. The wheat crop this year has been good but the availability to the Italians is doubtful since the Germans are in control of large areas. Agricultural production in Italy during 1943–44 crop year is not expected to be handicapped by any serious lack of commercial fertilizers.

**Butter.** Margarine supplies the same amount of energy and is apparently as easily digested as butter fat. Most brands of margarine are enriched or fortified with vitamin A. There is only one unconfirmed report from Wisconsin indicating that the kind of starch and sugar in the diet might bring to light a difference in nourishing quality of butter.

**Protein From Grass.** There is a shortage of concentrates high in protein value available for consumption by farm animals. One of the most abundant sources of protein is grass, only part of which is used for pasture, hay or silage. It is suggested that either a crude or extracted protein concentrate could be made from surplus forage and if economically produced could be useful in supplementing present stocks of protein concentrates, particularly for poultry and hog ration.

**Riboflavin Deficiency.** In 4 dogs, diarrhea, increased salivation, and mucous membrane lesions were relieved by 150 mg. nicotinic amide, whereas lacrimation, photophobia, and extreme infection of the eye vessels did not diminish until after an injection of 50 mg. riboflavin. This is considered evidence that such deficiencies occur as mixed diseases rather than as single entities. These findings are further evidence of the universality of nutritional deficiencies, since they suggest that deficiency diseases among pets of families who also have deficiency diseases are not uncommon.

**Tropical Guava Shrubs.** Guava powder, obtained from fruits of a neglected tropical shrub, is now being used by British troops as a rich source of vitamin C, and research in the United States indicates that these fruits may become more popular here. Dried guava is so rich in vitamin C that about 4 oz. would protect an Arctic explorer from survy for 3 months. The vitamin can best be preserved by blanching unpeeled quartered guavas after the central pulp and stones have been removed. The vitamin C appears to be relatively stable.

## SOUTHERN MEDICAL JOURNAL

*Vol. 36, September 1943*

*Nutritional deficiency as an etiologic factor in icterus accompanying pneumonia in the Negro. E. L. Turner, J. M. Bent, G. D. Holloway, J. R. Cuff and W. S. Quinland.—p. 603.
Variation and interpretation of glucose tolerance test. J. H. John.—p. 624.

**Nutritional Deficiency, Jaundice and Pneumonia.** One of the factors underlying jaundice as a complication of lobar pneumonia is nutritional. In the series of Negro patients studied, there was no evidence of a racial predisposition to jaundice but there was increasing evidence to indicate that inadequate diets reflect themselves in liver changes of major importance. It is suggested that more attention should be paid to the problem of diet in pneumonia even though it is a relatively short-lasting disease.

## AMERICAN RESTAURANT MAGAZINE

*Vol. 27, August 1943*

*Food poisoning—a constant danger in warm weather. P. DeKruiff.—p. 16.
Fish butchering tests and purchase specifications.—p. 25.

*Vol. 27, September 1943*

*Meat cookery in war time. J. A. Cline.—p. 25.
Beauty in floors.—p. 34.
Give a lift to meals with vegetables. L. D. Freeman.—p. 36.
*On the Martin-Nebraska assembly lines. M. Posley.—p. 38.

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*Vol. 27, October 1943*

Alberta M. Macfarlane reviews educational department work since 1940.—p. 62.
Meat cookery in war time. J. A. Cline.—p. 72.
Quick tricks from your supply shelf. L. D. Freeman.—p. 126.

**Food Poisoning.** Food poisoning is a constant danger in warm weather. Every cook should observe the following: store all food at 40° F. to prevent growth of staphylococcus—poultry, ham, tongue, cottage cheese, Hollandaise sauce, and cream-filled baked goods are particularly susceptible; when food is warm, or when frozen food has been defrosted, do not wrap it in wax paper before placing in refrigerator.

**Meat Cookery.** During the past 15 years a vast amount of research has been conducted in meat cookery, mostly small-quantity studies. A constant oven temperature in meat cookery causes less shrinkage and uses less fuel. The degree of doneness to which meat is cooked influences shrinkage as much as the temperature. The factors which have been found to affect the cooking time of roast meats are: the cooking temperature, size and shape of the roast, number of roasts in the pan, the oven load, the cut, the amount of fat on the meat, the degree of doneness.

**Food Service in Large Cafeterias.** E. Lynette Gatten, director of cafeterias for the Martin-Nebraska Company, serves 17,000 meals daily with her staff of 5 trained dietitians who must plan meals that will give the worker a maximum of health-building food at a minimum cost. The average meal costs around $.35. There must be a wide choice of sandwiches, soups, salads, and desserts besides a varied selection of hot foods. The menus are made up a week in advance and the food is purchased 3 days ahead. There are 4 cafeterias at the Martin-Nebraska plant, operated on a self-maintaining basis.

## BAKERS' HELPER

*Vol. 80, July 31, 1943*

*Bakers' prospects for optional enrichment appear uncertain. L. Sullivan.—p. 27.
Enrichment resolution of baking industry advisory committee. G. R. Williams.—p. 29.
*Dr. Wilder explains why he favors mill enrichment of all white flour. C. C. Swearingen.—p. 30.

*Vol. 80, September 11, 1943*

*Retarded doughs are helping retailers with wartime problems.—p. 52.

*Vol. 80, September 25, 1943*

Simplified variety production has many advantages. J. A. Lambeth.—p. 56.
*Lecithin—what it is and how to use it. L. R. Cook.—p. 58.

*Vol. 80, October 9, 1943*

Post-war machinery forecast. F D. Pfening.—p. 26.
How to prolong wrapper and slicer life.—p. 32.
*Dehydrated foods used in Army baking.—p. 62.

*Vol. 80, October 23, 1943*

*AIB forms new consumer department.—p. 31.
How to prolong wrapper and slicer life.—p. 37.
Roll make-up—here's how. W. E. Broeg.—p. 70.

*Vol. 80, November 6, 1943*

*What's your proper depreciation? E. Fair —p. 34.
How to prolong wrapper and slicer life.—p. 37.
Woman power vs. man power. D. F. Copell —p. 45.
QMC pastry cooks trained at Camp Lee, Va.—p. 64.
Roll make-up—here's how. W. E. Broeg.—p. 82.

**Flour Enrichment Problems.** The compulsory enrichment of all flour is still a controversial problem. Who will pay the additional costs? The yellow cast when riboflavin is added may present a problem if whiter, unenriched flour continues to be available on a competitive retail basis. Enrichment stability in flour, too, is a problem.

**Flour Enrichment Advantages.** Dr. Russell M. Wilder, former chief of the Civil Food Requirements Branch, WFA, gives these reasons in favor of mill enrichment of all white flours: it is of supreme importance that all flour used provide satisfactory amounts of thiamin, riboflavin, niacin and iron; extensive use of whole-grain and under-milled flours or of mixtures of white flour with legumes is undesirable as a means of correcting the inadequate content of these micronutrients in the white flour customarily used in this country; and enrichment of all white flour would be a means of ensuring satisfactory distribution of these nutrients which otherwise, because of shortages of meat, milk and other vitamin-rich foods, are likely in time of war to be inadequately provided by the diet.

**Retarded Doughs.** The practice of retarding doughs is accepted as a part of modern baking operation, larger batches of dough may be mixed and kept in the retarded dough box at the proper temperature and humidity. Thus saving time and permitting more effective use of ovens and eliminating need for the night shift. Women are more efficient than men in many types of bakery work, such as icing.

**Lecithin.** Lecithin is a fat-like substance found in all living cells. The primary source of commercial lecithin is soybean oil. Lecithin is of food value because it contains phosphorus and choline, a component of the vitamin B complex. Two outstanding chemical properties of lecithin are its ability to lower the surface tension between fats and any substance with which the fat may come in contact and to retard rancidity. Correct proportions should be used; too much lecithin destroys its power. A ratio of 1.75 to 2% of the shortening and lecithin combination is suggested. Lecithin has also been used advantageously in pan and dough greasing and in icings.

**Dehydrated Foods in the Army.** The dehydrated items which the Army is now using in quantity include apple nuggets, apricots, beets, cabbage, carrots, whole eggs, whole milk, skim milk, onions, white and sweet potatoes, rutabagas, tomato juice cocktail, pea and bean soups. Items used in smaller quantities include cranberries, baked beans, cheese, fruit spread, apple butter, and hominy.

**New Consumer Department.** The American Institute of Baking now has a Consumer Service Department which will include an experimental kitchen to develop information on the use of bread and other baked foods. Consumers must be taught how to use wheat products to their best advantage, especially in the preparation of adequate breakfasts and nourishing lunches.

**Depreciation Allowances.** To ensure funds for new equipment after the war, the proper depreciation allowance must be in the bank. Allowances may be set along any of these courses: the figures of the Bureau of Internal Revenue, a general over-all figure, or an individual and separate figure for each item of equipment. The last-mentioned is more accurate than either of the other two. Methods in successful usage for the measurement of used-up capital expenditure: the straight line, the reducing installment, the sinking fund, the annuity, and the operating time or unit of production method. Lists useful life expectancy of bakery plant equipment.

## FOOD INDUSTRIES

*Vol. 15, September 1943*

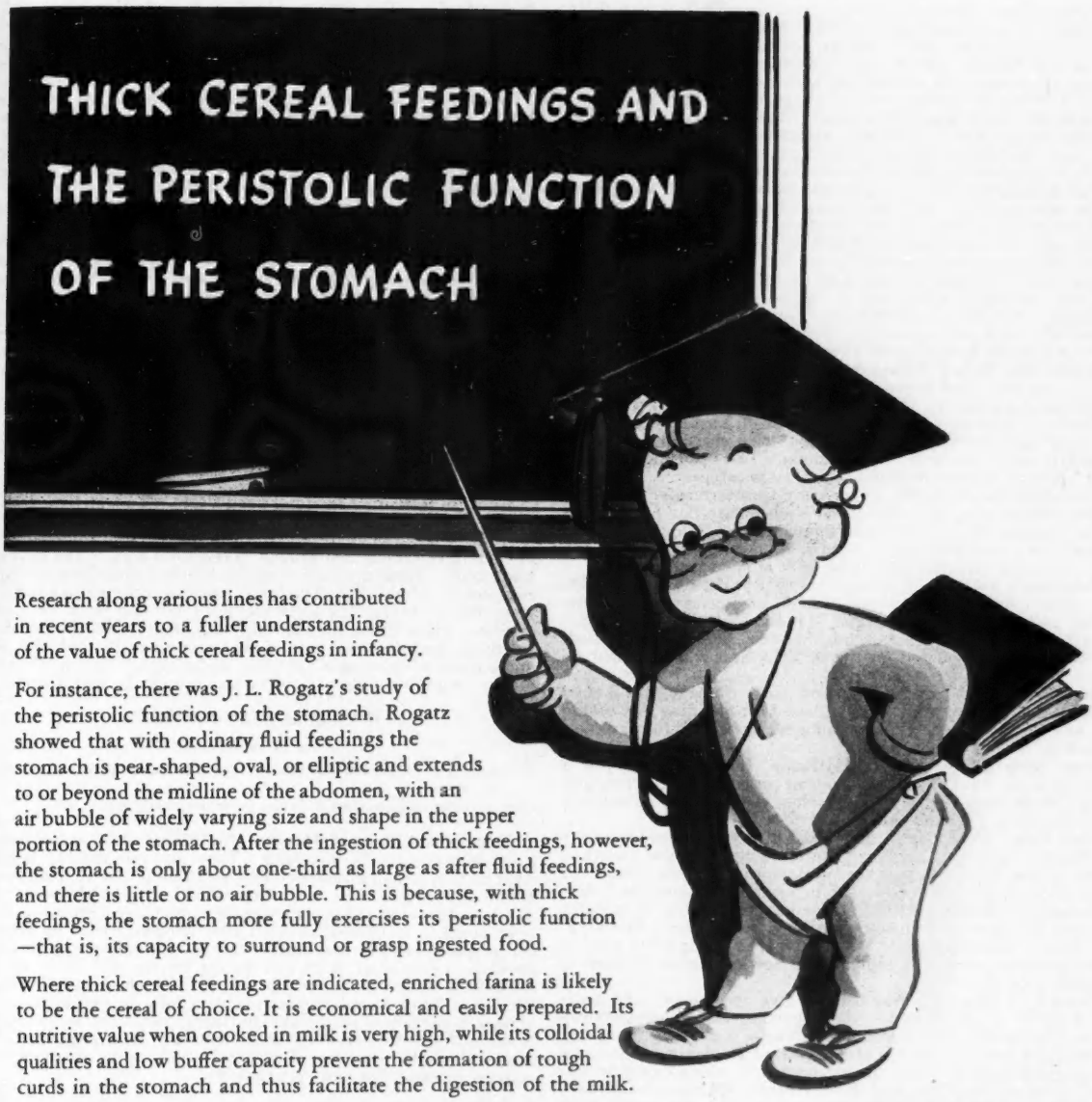
*Yield tests show six ways to save materials. J. G. Brown.—p. 55.
*Why not standardize food machinery? J. C. Haas.—p. 61.
Manual of dairy detergents and cleaning practices. Part III. M. E. Parker.—p. 66.
*Compressing spray-dried milk to save shipping space. B. H. Webb and C. F. Hufnagel.—p. 72.
*Potatoes baked, then dehydrated to avoid loss of product. O. E. Stamberg and H. Beresford.—p. 78.
*It won't melt.—p. 84.
*Rations for flyers.—p. 84.
*Products of the times.—p. 84.
*Meatless soup base.—p. 87.
*Gilding the lily.—p. 87.
*Rice with B vitamins.—p 87.

*Vol. 15, October 1943*

*Production, processing and uses of chicory. L. Stouffer.—p. 63.
*How to cook food for quick freezing.—p. 69.
*Roasting beverage materials. R. E. Kremers.—p. 74.
*Infrared dehydration of meats and vegetables tested. F. M. Tiller, E. E. Litkenhous and W. Turbeville.—p. 77.
*New ways to dehydrate cheese.—p. 80.
New packages and products.—p. 84.
*Recovery of yeast urged by Washington.—p. 101.
*Fast food freezer.—p. 113.
Food technology—new discoveries and inventions.—p. 127.

**Yield Studies.** With serious shortages of raw materials, high labor turn-over, pressure to make shipments, and the difficulty of securing new and more efficient equipment, one food industry plant evolved a plan for detecting and reducing material losses, to obtain the maximum results from every pound of raw material. This study was named a "yield study." A full-time, impartial, observant investigator was assigned to study each department and to learn all plant records. When the physical plant operations had been studied in detail and material losses located, the losses were evaluated in weight and in monetary value by actual tests and measures. Practical corrections and recommendations were formulated and put into effect.

**Food Equipment.** There is definite need for standardization of food machinery. Mechanical cake-mixers, for example, have different speed ranges; the actual drag, resistance, or effect on the batter in standard periods of time, as it is whipped, creamed, or mixed in the bowl, is not presented in definite terms; and there is too much variation in the shapes of the beaters and blades. Although the capacity in quarts of mechanical cake-mixer bowls




Research along various lines has contributed in recent years to a fuller understanding of the value of thick cereal feedings in infancy.

For instance, there was J. L. Rogatz's study of the peristolic function of the stomach. Rogatz showed that with ordinary fluid feedings the stomach is pear-shaped, oval, or elliptic and extends to or beyond the midline of the abdomen, with an air bubble of widely varying size and shape in the upper portion of the stomach. After the ingestion of thick feedings, however, the stomach is only about one-third as large as after fluid feedings, and there is little or no air bubble. This is because, with thick feedings, the stomach more fully exercises its peristolic function —that is, its capacity to surround or grasp ingested food.

Where thick cereal feedings are indicated, enriched farina is likely to be the cereal of choice. It is economical and easily prepared. Its nutritive value when cooked in milk is very high, while its colloidal qualities and low buffer capacity prevent the formation of tough curds in the stomach and thus facilitate the digestion of the milk.

Physicians can rely on Pillsbury's Enriched Farina for purity and unvarying high quality—and mothers will appreciate its modest price. This long-established product is produced under rigid manufacturing conditions with the assistance of precision products control, which extends from selection of the wheat to final checking of the finished product. Pillsbury's Enriched Farina is unrationed and readily available.

**Pillsbury's *Enriched* Farina**

Contains, per pound, not less than 1.66 mg. thiamine, 6.0 mg. niacin, and 6.0 mg. iron

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is quite uniform, the size in diameter and depth differs materially. This lack of uniformity in mechanical mixing machines indicates why one cannot be certain of the result when mixing doughs, unless the worker knows and understands the machine. Although there would be differences, such as machine design, automatic shifting of speeds, and stoppage upon completion, each mixer should do the same job in exactly the same time. A general standard beater size and design; a standard bowl depth and diameter; and the same peripheral speed per minute for each speed, should be established for standardization of work results.

**Packaging Dry Milk.** By compression or by jolting and bumping, as much as 42% of the space occupied can be saved by compression, but as dry skim milk does not form a cake so readily as dry whole milk, it was found that 24% could be saved by jolting. Small packages were more easily packed to a high density by jolting than large ones. In packing, a rectangular fiber box was the best for saving space, but it lacked strength and moisture tightness. The 30-gal. paraffin-lined tight oak barrel is the best nonmetallic bulk package as it affords strength, buoyancy, moisture and possibly gastightness, as well as ease in handling.

**Dehydrated Baked Potatoes.** Recent experiments show that if potatoes are baked before dehydrating the yield of the dehydrated product may be increased over that obtained by present methods. As the peel is dried for use as feed, waste is eliminated, and a sewage problem is solved. The dried shreds reconstitute readily in hot water in 5 to 10 minutes. The resulting product, after vigorous stirring, resembles mashed potatoes.

**Chocolate Bar for Army.** The Army Quartermaster Corps research laboratories have developed a chocolate bar for soldiers in the tropics which withstands temperatures as high as 120°F. It contains chocolate, sugar, skim milk powder, cocoa fat, oat flour, artificial flavoring, and vitamin B, and weighs 2 oz.

**Emergency Rations.** A special emergency liferaft ration, made and packed by the Continental Can Company for Army fliers, contains 12 packages of "Charms," 6 individual "P-K" packages, and vitamin tablets. The cans are 3″ square, hermetically sealed, and completely lacquered on the outside, and will be rolled up inside the rubber liferafts.

**Soya Products.** The Vee-Bee Company, Chicago, has 3 soya foods on the market: "Soy Krums," used for breading, soy muffin mix, and soybean flour. The muffin mix can be used for pancakes or waffles.

**Meat Soup Stock.** Standard Brands, Inc. has developed a meatless base, "Stox," for making savory soups, gravies, and sauces, made from hydrolyzed proteins, yeast-vegetable extract, salt, vegetable fat, and spices.

**Fruit Color.** A new fruit tablet called "Frulite," produced by the Frulite Company, Yonkers, New York, when added to cut or sliced apples, bananas, peaches, nectarines, apricots, plums, or pears, will help to retain original color without changing the flavor.

**Processed Unmilled Rice.** A rice permeated with B complex vitamins has been introduced by Albert Ehlers, Inc., Brooklyn, New York. The converted "White Giant" is a long-grain variety of rice and the conversion represents a new method of processing unmilled rice.

**Chicory.** Chicory is being used to give body, color, and additional flavor to chocolate, soybean sauces, and Worcestershire sauce. European chefs have used it as a seasoning in soups, gravies, and meat dishes. It also improves the flavor of molasses and ginger products. The chicory industry in this country is centered around Bay City and Port Huron, Michigan. Chicory, which is the common name for the root of *Cichorium intybus*, is grown and harvested similar to the sugar beet. After drying, the roots are roasted and ground, and packed in different forms of grinds and packages. A by-product is curly chicory which is used as a salad green while the root will probably soon be utilized as a source of levulose.

**Quick-Freezing.** The various parts of a ready-made dish should be cooked separately and mixed just before freezing. Cornstarch is added to baked beans as a thickening agent, and pectin to prevent curdling when the sauce is thawed. The bacteria count greatly increases the second day after the frozen food is left at room temperature. The packages to be frozen are filled with 48% by weight of cooked beans, 52% sauce, and pork weighing one-half ounce. The beans should be partially thawed before cooking and are best when cooked in a casserole or in a double-boiler.

**Roasting Beverage Materials.** The heating process and temperatures used for various beans and cereals depend upon the structure and chemical composition. The use of modern machinery has promoted uniformity of roast and has eliminated undesirable flavors caused by over-roasting. Cereals are malted before roasting. Attempts to introduce coffee aroma into cereals have not been too successful; however, during coffee shortages these products have been useful.

**Infra-red Dehydration.** Infra-red radiant heating increases the rate of heat flow over that possible with ordinary convectional heat transfer. The time required for dehydration of vegetables varies from 5 to 30 minutes. Thick slices of carrots cannot be completely dehydrated at the intense heat used for thinner slices. Beef and pork can be dehydrated in about 24 minutes and require only 15 minutes to rehydrate.

**Dehydrated Cheese.** Under the new dehydration process any type of properly cured hard cheese may be used. The cheese is grated and dried at room temperature and the final drying is at a higher temperature in a dehydrater. It can then be compressed into bars or cakes, the only noticeable change being that the dried product is inclined to be crumbly. The cheese may be used for cooking, for reconstitution into a cheese to be sliced, or into a cheese spread.

**Yeast.** Although Washington urges recovery of substantial wastes from brewers' yeast, yeast-makers oppose further recovery on the grounds that it is uneconomical at present market prices.

**Quantity Food Freezer.** A new type of fast freezing unit which can handle nearly all types of foods at the rate of 3 tons an hour, processed either loose or in packaged form, has been developed. The new machine operates by means of a conveyor belt, moving the trucks through the freezing compartments, and has rapid defrosting equipment.

## HORWATH HOTEL ACCOUNTANT

*Vol. 23, September 1943*

*Rationing does save for victory. E. B. Horwath.—p. 4.

**Effect of Rationing on Hotel Food Costs.** To test the effectiveness of rationing, the total consumption for May 1943 of 4 important hotels was analyzed, and the ratio of the composite cost of each of the items and groups to the total cost of the food sold was found. These cost ratios were compared with the corresponding ones for May 1942. The largest saving, both actual and relative, was on beef. The decreases on lamb and pork were quite similar. People took poultry as "next best" when they couldn't get meat, and the total cost of that group nearly doubled. Fish and seafood also increased sharply as did eggs. The problem now is how long the supply of poultry and fish can be maintained.

## HOSPITAL MANAGEMENT

*Vol. 56, October 1943*

*Educational role of hospital dietitians emphasized by current problems. M. Floyd.—p. 100.

Cost and other considerations of dietary department analyzed.—p. 104.

**Educational Role of Hospital Dietitians.** Dietitians have a great opportunity for teaching. They first entered the hospital field as teachers of student nurses and this phase of their educational program is still very important. The employment of a full-time teaching and supervising dietitian is recommended whenever possible, or if not, at least that adequate time be allowed for preparation and teaching. The daily work of the dietitian involves a continual effort in teaching employees. Now she has volunteers added to her pupils. Hospitals which enroll student dietitians have an additional problem now in finding time for classes in the face of manpower shortages, and in replacing medical lectures formerly given by staff doctors. It is suggested that more adequate teaching of medical students be introduced in courses in nutrition and diet therapy.

## HOSPITALS

*Vol. 17, August 1943*

*Wasted hours. M. Adele.—p. 47.

*Special training of new personnel helps to solve shortage. L. P. Hardy and W. B. Forster.—p. 48.

*War pinches British hospital diets, but no patient is denied necessities. E. M. Browne.—p. 89.

*Vol. 17, September 1943*

Training program outlined for dietitians' aides. Hospitals urged to further cause. K. M. Johnson.—p. 64.

Graphic view of shrinking personnel. What of effectiveness in disaster? H. W. Benjamin.—p. 79.

*Vol. 17, October 1943*

Posting notice: more dietitians needed: and hospitals can help. G. E. Hall.—p. 54.

**Training Employees.** "Job methods" training pays dividends by exposing lost motion in daily routine. A description of the job methods course given by the War Manpower Commission is presented.

**Training New Personnel.** The employee training program set up by the War Manpower Commission is described and recommended to the hospital dietitian.

**Food Rationing and British Hospital Diets.** The basic principle

# not quite bright!

Looks like a quick and easy way to get the dishes "done," all right. But whatever little Lester Lacking seems to think about it, rationing hasn't come to this — and won't!

There's an even quicker, easier way of doing the dishes, and leaving them snowily spotless for the next meal — and many, many more. How?

With *Wyandotte*. For dishwashing by machine or hand, for a mountain or a molehill of soiled plates, cups, saucers, glasses, silver, pots and pans — *there's a Wyandotte product to do the chore for you.* Making fast friends with the hardest water, when Wyandotte takes over, the job's as good as done — and done with a thoroughness to please the most fastidious.

Maybe you have an unusual or out-size cleaning problem, something that's really got you down. If so, call in the Wyandotte Representative — *today*. He's a specialist in getting chins up off the floor.

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of Britain's food rationing is to provide for everyone a diet according to his needs. Rights of sick persons to extra quantities of controlled foods are checked as closely as those of workers, vegetarians, and school children. War has brought only two substantial changes to the menu of St. Bartholomew's Hospital: the disappearance of fresh fruit, tomatoes and their juices, and the absence of variety. Britain's food rationing is more rigid, though not necessarily more stringent in certain respects, than the American system. Hospital supplies are controlled in retrospect, depending upon the previous month's numerical returns of ration books held. Patients are required to deposit their ration books with the hospital during their stay.

## HOTEL MANAGEMENT

*Vol. 44, September 1943*

Meat extenders in many lands.—p. 28.
Payroll enclosures that build morale and minimize labor turnover.—p. 30.
*How careful cooking conserves both fuel and food.—p. 33.

*Vol. 44, October 1943*

Good food hints. L. P. DeGouy.—p. 8.
*Six points to check in your food conservation campaign. A. Easton.—p. 16.
How British hotels and restaurants are solving wartime food problems. A. M. Snapper.—p. 20.
*Making your silverware last longer. A. G. Mezerik.—p. 24.
High-profit recipes for low-point meats. L. P. DeGouy.—p. 28.
Getting the most out of your steam heating system. F. H. Randolph.—p. 30.
Victory plates. A. Easton.—p. 37.
*What's new.—p. 39.

**Conserving Fuel.** The careful use of thermometers and thermostats conserves fuel for heating, cooking, dishwashing, and many other processes involving heating. Charts with correct temperatures for roasting, baking, and frying are available which make products more palatable and reduce waste. Modern, well-insulated ovens and other equipment have increased cooking efficiency and made fuel economy possible.

**Food Conservation.** Waste of food results from over-elaborate menus, short-order cooking, and complicated table d'hôte meals, improper preparation, carelessness in portion sizes.

**Care of Silverware.** If certain precautions are taken and remedies tried, silver maintenance problems can be eased. Care should begin when the silver comes back from the dining room soiled. Some points to be observed include absolute cleanliness in dishpans and washing machines; hot, sudsy, soft water for washing and clear hot water for rinsing; frequent removal of stains and tarnishing; and repair when necessary. Silver can be replated to look almost like new, but it is difficult, if not impossible, to buy any new silverware. Since so much silverware is thrown into the garbage through carelessness, careful watching or a coarse screen over garbage containers is suggested.

**New Products and Equipment.** Perma-Gloss flat-rim sinks which are easy to clean, will not peel or rust, withstand thermal shock, and are acid-proof, have been made available by the General Ceramics Company in 2 new sizes: 30 x 18″ and 32 x 18″ with 2 compartments. "Absorbo" is a new oil and grease absorbent and floor cleaner, granular in form, non-abrasive, and odorless, non-poisonous, and non-injurious to the skin, clothing, or flooring. It is available in 50-lb. bags from the Fidelity Chemical Products Corporation.

## ICE CREAM TRADE JOURNAL

*Vol. 39, October 1943*

*Better sherbets and ices. C. D. Dahle.—p. 30.
FDO-8 amendment may mean more sherbet.—p. 34.
U. S. reports on possible conversion of ice cream plants to frozen foods. F. L Thomsen and R. Gabel.—p. 38.

**Making Sherbets and Ices.** The characteristics of a good sherbet are similar to those of batch frozen ice cream. It should dish as readily as ice cream, cut well when in combination with ice cream in a brick, and not leak. It is coarser and harder than ice cream. The overrun in making a sherbet should be below 50%, preferably 25 to 35%. The correct amount of sugar is imperative. Today 28 to 30% of the sugar is a corn sugar. To maintain the same desirable qualities of ice cream, sugar content and the overrun must be controlled. A most serious defect in ices is excessive firmness, due to failure to standardize the sugar content and the overrun. High overrun and high sugar content make a soft product; low overrun and low sugar content make the opposite.

## JOURNAL OF HOME ECONOMICS

*Vol. 35, October 1943*

*Home economics offerings in liberal arts colleges. C. M. Brown.—p. 479.
*Standards for kitchen utensils. M. Wilson.—p. 490.
Health teaching in the first grade. H E Whittinghill.—p. 499.
The self-chosen diets of college girls in a cooperative dormitory. T. J. McMillan and R. M Leverton.—p. 514.

*Vol. 35, November 1943*

Wartime aid to school lunches. R S. Carpenter and M. M. Morris.—p. 553.
Home economics for loyal evacuees. A. B. Marsh.—p. 567.
Cafeteria-laboratory. M. R. Anderson.—p. 572.
Victory food book. M. Boyd.—p. 573.
Cooking for fun. M. Waters.—p. 578.
Ladies must lobby!—p. 579.
Diets of 524 high school girls. J. M. Leichsenring, E. G. Donelson, H. H. Deinard, M. S. Pittman, M. Cooprider and V. Haggart.—p. 583.
Vitamin C loss from soybeans stored in cooked and fresh state M. E. Reid.—p. 587.

**Home Economics in Liberal Arts Colleges.** The small liberal arts college in developing a home economics curriculum should recognize its limitations and not try to copy the program of the larger institutions or to do more than it can with its facilities. Each should contribute to home economics education by using to the maximum its facilities and the particular talents of its faculty. A recommendation has been made that education for personal and family life should become an integral part of general education. Another is that more flexible programs for home economics students be initiated. Programs of education for personal and family living should be developed if they are to meet the needs of the majority of their students, irrespective of whether they offer preparation for professional work in the field of home economics.

**Necessary Kitchen Utensils.** During the last 4 years, Oregon State College has been compiling 3 lists of utensils needed in the home or school kitchen in order to make sure that the right tools are available for each process. In all cases, the goal was economy in the number, size, and cost of utensils, taking into consideration the economy in the time and energy of the worker and the prewar content of kitchenware stocks. The first list was prepared for the farm kitchen, with the assumption that the cooking was done for 4 to 6 persons on a wood-burning range; the second list, for the home management house using a gas or electric range; and a third, for high school homemaking laboratories equipped with electric or gas stoves. When these lists are used as guides for buying and as a basis for planning utensil storage facilities, often less storage space is required and the cost of new utensils is counterbalanced by lowered cost of cabinets.

## NATION'S SCHOOLS

*Vol. 32, October 1943*

*Plate lunches in war time. K. R. Dougherty —p. 48.
Good news on the food deal.—p. 49.
Present paint problems.—p. 50.

*Vol. 32, November 1943*

*Lunches can be complete. M. Rogin.—p. 52.

**School Lunch Costs.** With the foods that are being received from the WFA the cafeteria of the G.A.R. Memorial High School has maintained food prices, with the exception of several meat dishes. A plate of four vegetables or a meat and a vegetable can still be purchased for 10¢. Bread crumbs and vegetables are used as meat extenders.

**School Lunch Menus.** Complete lunches, which furnish one-third of the daily nutritional requirement, generally include one-half of the vegetable requirement in the main dish and the other half as a fruit requiring a minimum amount of preparation. However, when the main dish consists of a salad requiring no cooking, a cereal pudding is often offered as the dessert. Emphasis is placed on the use of foods rich in proteins, minerals and vitamins which are low in point value or not rationed.

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*Diets of Women War Workers*—Dietary studies show that a large fraction of employed male and female war workers do not receive a balanced diet and examinations reveal high prevalence of mild chronic nutritional deficiencies. Reports coming to our Committee indicate the women workers in particular are courting "hidden hunger" by gulping a doughnut and a cup of coffee for breakfast and munching on a cold sandwich for lunch. Vegetables, salads, fruit, and milk are notably absent from the breakfasts and lunches of women workers, who should be informed that careful selection of food can keep a trim waistline and at the same time provide adequate vitamins, calories, minerals, and proteins. There is a growing tendency to cut down the lunch period. No war worker can do a top-notch job when he has to eat on the run. An excessively short lunch period will act as a boomerang, taking its toll in reduced efficiency and absenteeism.—*Senator Thomas C. Desmond, chairman, New York State Joint Legislative Committee on Nutrition, at a public hearing, New York, December 15.*

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"BUT, MOMMY," faltered little Beulah, "today's my first exam and I can't help being nervous."

"We cows who work for Borden," laughed Elsie, "are *always* taking examinations. You'll get used to them."

"Why should I have to get used to them?" pouted Beulah. "Aren't those Borden inspectors ever satisfied?"

"They're never satisfied with anything less than perfection!" smiled Elsie. "That's why we all have to be inspected regularly."

"You see, our milk and cream go into Borden products like Evaporated Milk, cheese, Beta Lactose, and Biolac. And that milk and cream must be as pure as the very finest cows and laboratory controls can make them."

"Gee!" sighed Beulah, wistfully, "do you think I'll ever be that good?"

"Of course, dear!" beamed Elsie. "You're a Borden girl, and if you're Borden's, you've *got* to be good!"

**—if it's Borden's, it's got to be good!**

# News Notes

**Nutrition Foundation, Inc. New Grants-in-Aid.** The board of trustees of the Foundation on November 14 approved 12 new grants-in-aid amounting to $29,900 providing for studies in many fields of nutrition including nutrient values of soybeans; growth, reproduction and lactation in rats on highly purified diets; microbiological analysis of amino acids; absorption of iron compounds in anemia; nutritive role of hydroxy fatty acids; experimental lathyrism; pyrimidine nucleosides or nucleotides as growth factors; carbohydrate metabolism; nutrition in relation to relapses in rheumatic fever; diet and congenital malformations; and pyruvate metabolism. In recommending these new grants, Dr. Charles Glen King, scientific director, said: "The stringency of protein supplies is not so severe as many thought it would become, but there is no doubt of the need for more information concerning the quality of protein in such products as soybeans, yeast, cereals and vegetables. Work of this nature is contributory to protection of our national health and economy in peacetime, in addition to helping meet war problems. . . . Many of us are convinced that during the next decade there will be a rapid and widespread recognition of nutrition as a basic part of our public health program. The medical profession is beginning to feel confident that nutrition has enough scientific standing to be recognized as a field for professional specialization."

**New York City Division of Nutrition.** Created by the Department of Health, the new Division of Nutrition will supervise the intensified nutrition program necessitated by the war and current food shortages. Mrs. Gertrude Gates Mudge will head the 8 nutritionists who have been appointed. One of the division projects will be the development of a staff education program for physicians and nurses in the Health Department. Specialized nutrition instruction will be provided, with emphasis on timely food information. Through the district health centers, the nutritionists will also cooperate with public and private social and welfare agencies in the development of neighborhood programs.

**American Medical Association 1944 Session.** The annual meeting of this association will be held in Chicago June 12–16. The Technical Exposition will be housed at the Stevens Hotel and the Scientific Exhibit at the Palmer House.

**Management of Poliomyelitis.** The November 27 issue of the *Journal* of the American Medical Association contained in its "Medicine and the War" section Circular Letter No. 175, recently released by the War Department, regarding the management of poliomyelitis, including isolation precautions, general, local, and special measures in the acute phase, and management during the subacute and convalescent phases. Under general measures, it is stated that "a nutritious, easily digestible diet, adequate in or supplemented by vitamins, should be maintained when it is tolerated; and the adequacy of fluid intake should be assured." This is an excellent summary of accepted treatment in poliomyelitis.

**Canadian Home Economics Association.** The *Newsletter* of this association, dated November 1943, contains the following list of officers for the current year: president, Frances McKay, director of women's work, Department of Agriculture, Winnipeg; vice-president, Isobel Robson, Winnipeg public schools; and secretary-treasurer, Norah Cherry, director, Nutrition Centre, Winnipeg Electric Company. The constitution of the association is also included in this issue. An interesting feature of the *Newsletter* is a "Who's Who in Ottawa" listing the many important positions held by members of the association in the Dominion Government and illustrating the tendency to place trained women in positions of importance. Among those listed are: Laura Beattie, head, Consumer Information Service, Wartime Information Board; Anna M. Speers, director of requirements, Foods Administration; Laura Pepper, chief, Consumer Section, Department of Agriculture.

**Home Economics Field Day.** Sponsored by members of the Detroit Dietetic Association, the Hewibs, and the Home Economics Department of Wayne University, the following program was presented on November 3 at the *Detroit News* Auditorium, the Hotel Statler, and Wayne University Studio: "The Role of the Home Economist on a Newspaper," Mrs. Kay Kopera, household editor, and Jean McBride, director of test kitchen, the *Detroit News*; "The Role of the Home Economist in the Hotel," Dorothy Eckert, dietitian, and Mrs. Sarah Hippee, executive housekeeper, Hotal Statler; "Merchandising," Marie Margaret Winthrop, Montgomery Ward Company; "The Commercial Field," Mrs. B. Alene Theisner, director, Detroit Dairy Council; "The Community Service Field," Mrs. Jean Tripp, director of nutrition, Department of Health, Detroit; "Nursery Schools," Irma Unruh, and "School Lunchrooms," Winning Pendergast, Board of Education, Detroit; "Health and Family Welfare Services," Dorothy Hacker, nutritionist, Visiting Nurse Association; "The Dietetics Field," Mary M. Harrington, director of dietetics, Harper Hospital; and "Federal Governmental Services," Gwen Edwards, home demonstration agent, Monroe, Michigan. Presiding officers included Margaret O'Connell, president, Detroit Dietetic Association; Winifred Eliason, Greenfield's Cafeteria, Detroit; and Jane Porter. Irene Hickey, Detroit Hewibs, was hostess chairman. Mrs. Frances Sanderson, director, Home Economics Department, Wayne University, was chairman of the committee which planned the various trips to food service departments and other activities demonstrating housekeeping on a large scale.

**Sugar Research Foundation, Inc. Announces Program of Research.** Dr. Robert C. Hockett, associate professor of organic chemistry, Massachusetts Institute of Technology, has been appointed scientific director of this foundation, as announced November 15. The appointment was described by the Foundation's president, Joseph F. Abbott, as "the first step in a new and extensive scientific program to extend knowledge of the role of sugar and other carbohydrates in the human body and also of the chemical transformations to which sugars can be subjected."

**Dietitians Needed by Los Angeles County Department of Charities.** An announcement received too late for inclusion in the December JOURNAL offers a salary of $159 to $187.80 (48-hour week) and states the following qualifications for hospital dietitians: age requirement, not over 55 years at date of examination; education and training, graduation from an accredited college with a major in home economics, dietetics, or foods and nutrition, plus completion of an approved hospital, administrative, or clinic course in dietetics. One year's technical dietetic experience in a hospital or clinic may be substituted for the graduate course in dietetics. Duties include the supervision of kitchen employees in the preparation and apportioning of food and beverages for special and weighed diets; supervision and instruction of student nurses and student dietitians in dietetics, including the calculation and weighing of regular diabetic, soft, liquid, ketogenic, and other therapeutic diets in adapting menus and in preparing special foods and formulas; checking food carts and trays of special diets, including calculations, to see that diets conform to physicians' orders; teaching patients leaving the hospital their dietetic needs; taking nutrition histories; calculating food values and preparing nutritional tables; assisting in laboratory nutritional analyses; keeping dietetic and nutrition records; and preparing reports. The announcement stated that applications should be submitted before December 4. Full information regarding examinations may be obtained from the Los Angeles County Civil Service Commission, 102 Hall of Records, Los Angeles 12.

**The Margarine Controversy.** Editorials appeared in the New York *Times* on two successive days, deploring the "discriminatory taxes" on oleomargarine. It was pointed out that "if the unjustified legal discriminations against margarine are to be removed, we shall have to go further than changes merely in the Federal law . . . 8 states tax all margarine, and 22 tax all margarine except that made from domestically produced fats and oils. Fifteen states prohibit its use in state institutions. . . . The oleomargarine industry is subject to a special license tax in 17 states. Special excise taxes are imposed on margarine in 22 states." It is also stated that "as long as margarine is not actually injurious to health (and, like other products, it must meet the requirements of the Food, Drug and Cosmetic Act) comparisons of the nutritive value of margarine are irrelevant so far as legal discrimination is concerned."

**Food Rationing.** OPA reports that, beginning February 27, three changes designed to simplify food rationing will go into effect: (1) All red and blue stamps in War Ration Book Four will have a value of 10 points each, regardless of the number on the face of the stamp. (2) Red and blue tokens, valued at 1 point each, will be used as change. It will not be necessary for shoppers to obtain a supply of tokens before they shop. Tokens simply will be used to make change for the 10-point stamps. (3) Stamps in War Ration Book Four, the only ration book which will be needed to shop for food after March 20, will be valid for longer periods than has been the case in the past, making it easier for housewives to budget their points and obviating last-minute rushes before expiration dates. The tokens are made of vulcanized fiber, larger than nickels and about the thickness of a dime.

**National Food Situation.** The October *Demand and Price*

# Foley FOOD MILL

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You save time and energy in straining all fresh cooked vegetables and fruits with the Foley Food Mill. With just a few turns of the handle, it separates fibres and hulls and purees any cooked food fine enough for the smallest baby or for any adult diet. Saves food values. No waste.

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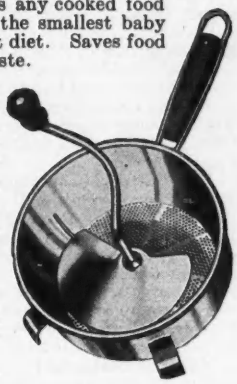

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☐ Send Special Offer to Dietitians on Family Size Foley Food Mill
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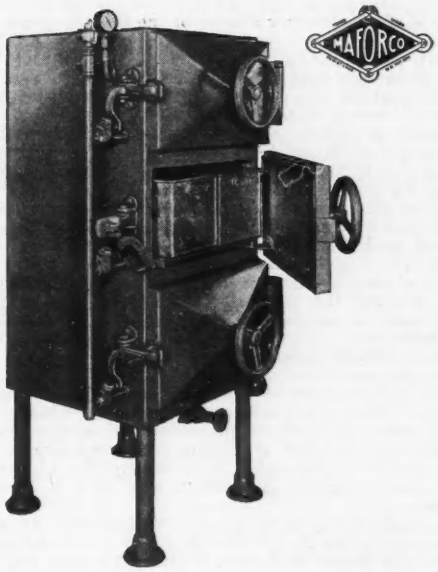


# The Comptroller of Control

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The utter simplicity and safety of MAFORCO operation are additional outstanding advantages possessed by this superior steamer, designed and manufactured by experts with more than 40 years of leadership in the specialized field of quality institutional equipment of character.

## MARKET FORGE COMPANY

*Everett Station* *Boston 49, Mass.*

*Situation* estimated that consumer expenditures for all goods and services would reach 90.6 billion dollars in 1943. Of this amount, food and beverages were expected to account for 32.2 billion, equal to 22.7% of total consumer income or the smallest percentage on record.

On November 5 federally-inspected slaughterers were directed by WFA to increase from 45 to 50% the quantities of beef meeting Army specifications that must be set aside, representing 25 to 28% of the total estimated beef production. This order applies to utility grade as well as to commercial, good and choice grades. Anticipating civilian requirements next spring and summer, WFA has issued a statement of policy to the meat industry intended to encourage the accumulation of canner and cutter beef during the current peak production season for these grades, as follows: "In the event that a control of inventories of frozen and cured meats is resumed by FDA, inventories of canner and cutter beef accumulated prior to January 1, 1944 will be exempted from the provisions of such inventory control until at least July 1, 1944."

WFA directed the release in November of approximately 2,790,000 cases of canned peaches, peas, and tomato catsup to civilian consumers; also 540,000 cases of pineapple, 77,000 cases of figs, and 2,600,000 cases of string beans and tomatoes. These foods are a portion of the reserves held by canners to meet possible emergency requirements of the Government. Upon specific release by the Office of the Quartermaster General—which purchases canned foods for all Government needs—individual canners were permitted to sell a part of their set-aside quantities through regular commercial channels. Civilian supplies of canned asparagus, corn, pumpkin, and spinach were soon to be similarly augmented.

Citrus canners will be directed to set aside for Government war needs approximately the same quantity of canned grapefruit juice from the 1943–44 pack as they did last season, even though 2,400,000 cases of that pack have recently been released. As was the case last year, the entire production of other canned citrus products (grapefruit segments, orange juice, and blended citrus juice) will be reserved for Government needs. War requirements are greater than last year for orange juice and grapefruit segments, smaller for blended citrus juice.

An increase of rice for civilian use was made possible by WFA's removal of all governmental set-aside requirements for rice milled in November.

Because of the relative shortage of handling facilities in Maine and the threat of waste, WFA on October 13 requested the Association of American Railroads to publish a blanket tariff which would permit storing, packing, repacking, and grading in transit of Maine potatoes being shipped into the area east of the Mississippi River.

Approximately 2 million bushels of "State Fancy" or higher grade apples in Washington or Oregon were ordered set aside by WFA November 5, to meet the requirements of the armed services for fresh apples.

Removal of governmental set-aside requirements for dry peas and split peas and a reduction in the required reservation of dry edible beans, announced November 2, increased the supplies in civilian channels. A record crop of dry peas permitted the removal by OPA of this commodity from the list of rationed foods, and a record crop of beans resulted in a reduction of ration point values from 4 to 2 points per pound.

To facilitate marketing and slaughter of record numbers of livestock, quota limitations on the slaughter of livestock were suspended by WFA November 23 until further notice.

The November *Cold Storage Report* indicated that stocks of all commodities with the exception of apples, pears, and frozen poultry were heavier than both those of a year earlier and the 5-year average. Poultry stocks, while less than those of a year ago, were considerably above average.

**Canning Equipment for 1944.** Home canners have been urged by USDA to save all glass jars and tops suitable for re-use, in particular, commercial jars and tops, many of which are standardized as to size and type of opening. Adequate supplies of metal sealing disks for both size "63" and "70" jars will be available in 1944. These will be flat metal sealing disks with flowed-on rubber compound. Coffee jars with paper caps may be outfitted by using a metal screw cap from another jar plus a sealing disk. After the sealing disk is secure, the screw cap is removed and used to seal another jar. Wartime rubber jar rings are not reusable for home canning, but can be used to seal home-dried foods packaged in glass. All "glass jars and glass disks should be scalded," and metal screw bands and screw caps washed, before storing.

**Nutrition Program Materials.** The November *Nutrition News Letter* announced that the folder entitled "National Wartime Nutrition Guide," listing the 7 basic food groups with suggestions for alternates, prepared by the Nutrition and Food Conservation Branch of FDA, and the pamphlet, "Lunch at School," describing in general the school lunch program, had been published in quantity and were obtainable free from the regional offices of FDA. Single copies of "Why Feed the Insects?" a folder illustrating the food damage done by pantry pests and showing how the housewife may control them, and "Preparing Home Grown Vegetables and Fruits for Freezing," a leaflet issued by the Bureau of Agricultural and Industrial Chemistry, will be furnished free by the Office of Information, USDA.

Nutrition chairman and others interested in reference material of a technical nature may obtain single copies of "A Report on Margarine" from the Food and Nutrition Board, National Research Council, Washington.

An educational film entitled "This, Too, Is Sabotage," showing how malnutrition "casts its shadow across war-working Americans" and how adequate diets can improve the health of the nation, will be loaned free to schools and colleges, nutrition, dietetic, and home economics groups, etc. by Visual Education Section, Westinghouse Electric & Manufacturing Company, Mansfield, Ohio. This is a 25-minute, sound motion picture in 16 and 35 mm. sizes.

**New Edition of Directory of Biological Laboratories.** A revision of this directory has just been published by the Burns Compiling & Research Organization, 200 Railway Exchange Building, 80 E. Jackson Boulevard, Chicago 4. Approximately 800 laboratories are identified and listed, comprising those concerned with biological, bacteriological, or biochemical investigations. Research laboratories are included, also commercial consulting laboratories and those related to manufacturing processes. Personnel and professional data are given for the laboratories listed, and one section of the work is a buyers' guide. The price of the book is $3.

**National Restaurant Association.** New research-statistical and public relations departments have been established at the headquarters of the association, according to a release received in November. The work of these new departments will be geared closely to the work of the educational department and the Washington office, and to important national committees.

At the recent war conference of this association, $51,000 toward a goal of $100,000 was obtained in 51 minutes to be used as a basis for establishing a 4-year course in restaurant management at Northwestern University, leading to a degree.

On November 1 the association national headquarters was moved to 8 South Michigan Avenue, Chicago 3. Copies of the proceedings of the Wartime Conference in Cleveland October 19–22 may be procured from this address at $4 a copy.

According to the November 18 *News Letter* of the association, WPB Order No. L-140-B, issued November 5, specifies that a small amount of nickel may be used for plating flatware for restaurants, institutions, and home use. Alloy steel flatware may also be made for restaurant and institutional use from alloy steel in distressed stocks. Only two patterns may be manufactured in either silver or chrome flatware or in alloy steel items.

The *News Letter* describes some of the booths at the Wartime Conference, among them the soya booth, which attracted much attention. Information provided on posters in the booth is given in detail in the *News Letter* and pamphlets containing soya recipes and their sources are listed, among them, "Durkee's Soya Recipes," Durkee Famous Foods, 2670 Elston Avenue, Chicago; "German Soya Cook Book (reprint)," Soybean Digest, Hudson, Iowa; "Vivasoy Recipes," Commander Larabee Milling Company, 600 Baker Arcade Building, Minneapolis; "Wartime Recipes With Soy Flour and Grits," H. D. Lee Company, Kansas City, Missouri; "Staley's Soy Recipes," A. E. Staley Manufacturing Company, Decatur, Illinois.

The November 28 *News Letter* is devoted to the subject of food waste. A report of a survey made in Lansing, Michigan, is included, in which it was demonstrated that only 5% of the food waste in residential garbage loads was edible, in contrast to 16% in commercial garbage loads. Amost half of the total edible waste observed was contributed by restaurants, industrial cafeterias, hotels and hospitals. A list of 42 ways in which food waste can be prevented is also included in this issue, based on questionnaires sent to members by the educational department of the association.

**National Society for Crippled Children Easter Seal Sale.** Vivian M. Hackett, editor, *The Crippled Child*, Elyria, Ohio, writes that the annual sale of Easter seals for the benefit of crippled children will be conducted this year from March 9 to April 9. The seals cost a penny each or $1 per sheet of 100 and will be distributed by the National Society for Crippled Children and its affiliated organizations.

**A Note From North Africa.** In a letter to the Chicago Office, Lt. Gertrude McDonald, 300th General Hospital, "Somewhere in North Africa," writes: "Elizabeth Shamburger is with me in the unit. She joined us just as we left Camp Forrest. We arrived in North Africa around the first of September after a comparatively uneventful trip. The Atlantic was as calm as any pond in Tennessee. North Africa is a barren, burnt, hilly, country with a few Arab huts thrown in. These huts are made of sun-baked clay with straw roofs. We have no patients yet so our daily

## *Made to order for dietitians*

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# *Applied Dietetics*

**New Second Edition, November 1943**

The author who pioneered in organizing the Food Clinic of the Boston Dispensary (now named the Frances Stern Food Clinic) has kept at the job of developing more effective methods of planning and teaching normal and therapeutic diets which she now presents in the fully revised second edition.

**Constructed for quick information,** the book makes available literally thousands upon thousands of data in coordinated tables, each of which has its definite place in simplifying the computation of diets.

**Dietary outlines** consider the treatment of such conditions as food allergy, constipation, peptic ulcer, obesity, diabetes, pregnancy and the vitamin deficiencies.

**Typical diets** and meals for the day are presented for patients as well as for normal adults and children.

**The relation of personality to food** is emphasized: what the food preferences of different nationalities are, how to educate the patient on the normal and therapeutic diet (with new pictures and charts for instruction), or how to adapt diets to the economic possibilities of the patient.

**APPLIED DIETETICS** is truly what its title promises—neither a cook book nor a physiological and pathological monograph, but a clear road to facts and values as dietitians and physicians need them daily in the prescription and computation of diets.

**Among the new features:** recent knowledge of the vitamins incorporated in text and tables; dietary outlines given for vitamin deficiencies; lists of foods equivalent in vitamin values included. Diets re-evaluated in terms of mineral requirements. Diabetic diet in accord with latest authoritative opinion.

APPLIED DIETETICS *answers questions like these:*

To what extent do energy requirements of boys differ from those of girls of the same age?

What are the food values and measures in terms of average servings of food? (4000 facts in one extensive table).

How do vegetables and fruits compare as to their content of calcium or phosphorus or iron?

Which common foods provide an excess of acid ash or of alkaline ash?

Which are the foods and what the amounts that are equivalent to one egg in riboflavin, or to a quarter-ounce of beef in niacin?

How does diet fit into the treatment of peptic ulcer?

What is a typical diet in colitis?

How do you plan low caloric meals for a pregnant patient?

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routine consists of planning the menus and supervising the preparation of the food for the personnel. We are taking in all the sights and will be glad to leave the North African mud."

**Lt. Velma M. Knearl Writes From the Pacific.** In a letter dated November 4, Lieutenant Knearl wrote from the South Pacific theatre of war to the Chicago office as follows: "In the line of food we are very fortunate and have had to use very little dehydrated foods. We get plenty of fresh pork and beef, very little turkey and chicken which so far we have used for special diets only. The beef is island beef and of excellent quality. We gets lots of fresh vegetables and fruits that are raised on this island, and a few quarts of milk for special diets. We use dried and evaporated milk otherwise. I have been on two different islands since leaving home. There are many beautiful flowers here, but no lovelier than in many of the states. The gardenias are not so pretty as the gardenias in the southern states, but the orchids cannot be excelled. I had never seen so many orchids or realized that there were so many different varieties. Not long ago I saw for the first time a white orchid which is a rare variety of pure white with one purple petal."

**Second Lt. Mary K. Camp Writes From India.** Excerpts from a letter written by Lieutenant Camp November 14 from "Somewhere in India" follow: "We have just recently moved into our new diet kitchen for American patients and it is a dandy. Not streamlined but the best this place has to offer at the moment. It is a bamboo basha, 20 x 60′, with red brick floor and screened windows and doors. I insisted on high ceiling and wide eaves to have it as cool as possible. Our cooks are all American boys with our own outfit.

"I have a great time making menus from canned foods but we do quite well. We use many dehydrated foods such as Irish and sweet potatoes, pea, bean, and vegetable soups, onions, cabbage, tomato juice cocktail, etc. We get plenty of "Spam," sausages, bacon, fish, etc., *too much* corned beef! We miss ham as we don't get any. We get all the canned fruits, juices and vegetables. We use some fresh fruits and vegetables but only those that can be peeled and they must be specially washed. We have mangoes, cocoanuts, bananas, pineapple, tangerines, tomatoes, cucumbers. People who live here have all sorts of fresh vegetables, such as lettuce, string beans, etc.

"We wear khaki shirts and slacks, also light-weight khaki-colored bush jackets, skirts, and dresses. I brought 4 cotton seersucker dresses with me and one silk one. They have been lifesavers for me as I put on a clean one in the morning, one in the afternoon and then change again in the evening. Three showers daily.

"One of the nurses and I have just returned from a 12-day leave. We . . . traveled over 4000 miles and mostly by plane. We saw many of the most interesting sights of India. I celebrated my birthday in Calcutta."

**Frances Livingston Hoag Receives Appointment.** Miss Hoag has been appointed supervisor of the school lunch program under the Department of Public Instruction, Commonwealth of Pennsylvania, Harrisburg, according to a letter received November 18.

**Mary Ellis,** graduate of Teachers College and Columbia University, class of 1939, has recently been appointed to the teaching staff of Woman's Medical College, Philadelphia, as assistant in therapeutics.

**District of Columbia Dietetic Association.** The following officers have been elected for 1943–44: president, Mary Warmuth, Providence Hospital; president-elect, Helen B. Brown; secretary, Lt. Ruth Buchman, Walter Reed Hospital; delegate, Mildred Parker, St. Elizabeth's Hospital.

At the annual Scientific Assembly of the Medical Society of the District in September, a nutrition exhibit depicting the correlation of the nutritionist, dietitian, and consulting dietitian with the work of the physician was displayed by members of the association.

At the annual convention of the Maryland-District of Columbia Hospital Association in October Mrs. Helen H. Brown read a paper on "Novel Sources of Dietary Personnel."

On November 15 the association in cooperation with the United States Army sponsored a special meeting at the Archives Auditorium. Dietitians, home economists, nutritionists, teachers, and students majoring in dietetics from Washington and vicinity attended the meeting to hear about the work of their fellow dietitians serving in the United States and overseas with the Medical Department of the Army. The urgency of the Army's need for dietitians was stressed. Speakers included: Brigadier General C. H. Danielson, Officer Procurement Service; Lt. Col. Gerald H. Teasley, Medical Corps; and Major Helen C. Burns, Director of Dietitians, Office of the Surgeon General.

Louise Clark, treasurer of the association and formerly dietitian, Mt. Alto Hospital, has been transferred to Veterans Administration Hospital, Portland, Oregon. Ruth M. Cornman, formerly chief dietitian, Glenn Dale Sanatorium, Glenn Dale, Maryland, is now chief dietitian at the hospital at Granada Relocation Center for Japanese at Amache, Colorado.

**Maryland Dietetic Association.** Reports of the Pittsburgh convention were presented at the November meeting by Alice Jané, Helen Baughman, Miriam Connelly, Elizabeth Hedgecock, Colleen Hambleton, and Alma Bering.

According to information recently received concerning Maryland dietitians in the armed forces, Lt. Mary Eaton is stationed "Somewhere in England," and Second Lts. Elizabeth Shamburger in Tunisia, Angela Mason at Camp Lee, Mary Triplett at Fort Dix, Adele Knerr at Baxter General Hospital, Spokane, and Ann Engebretsen at Percy Jones Hospital, Battle Creek.

Recent marriages include that of Ruth Hwang to Mr. Ben Lee, and Ruth Hyer to Second Lt. George Armstrong.

Mary Lenker, formerly of Presbyterian Hospital, and Neva Keene, Jewish Hospital, have been appointed staff members at the Union Memorial Hospital. Elizabeth Sircom is apprentice dietitian at Halloran General Hospital, New York.

**Massachusetts Dietetic Association.** Members of the association have been urged to join the Massachusetts Public Health Association in order to "stimulate further the interest of the public health physician in the field of dietetics . . . and to extend the services of the dietitian in the field of public health."

A meeting was held in cooperation with the First Service Command, Officer Procurement Branch, in Boston, December 6. An Army dietitian and a member of the Medical Department, A.U.S. were speakers, and moving pictures were shown, for the purpose of acquainting those present with the work being done by dietitians in the Army.

**Memphis Dietetic Association** recently held a reception honoring Fairfax T. Proudfit in commemoration of the twenty-fifth anniversary of the publication of Miss Proudfit's textbook *Nutrition and Diet Therapy*. The ceremony, which took place at the John Gaston Hospital Nurses' Home, included the presentation of gifts and flowers, and a musical program by University of Tennessee medical students.

**Michigan Dietetic Association.** A meeting on November 13 at the Hotel Statler, Detroit, included, among subjects discussed, "Unidentified Factors in Nutrition," by Dr. James Orten, professor of physiological chemistry, Wayne University Medical School; and "Butterworth Freezing Project," Dorothy Swift, dietitian, Butterworth Hospital, Grand Rapids.

According to the winter issue of the *Bulletin*, Michigan dietitians in Army service include Betty Myrbo, Rosemary Folgate, Louise Froleigh, Patricia Roskbank and Dorothy Evans from the student training course at Ford Hospital; Dorothy McRae, formerly at St. Mary's and Providence Hospital, now stationed at Clinton, Iowa; Donna Ensign, Herman Keifer Hospital, stationed on the West Coast; Mrs. Gladys Rambler and Mary Miller, Harper Hospital, with the Harper Unit in North Africa; Judy Brosius, Helen Perkins, Catherine Fox, Louise Riley, Jean Wirt, and Alice Goddard, former graduates of the Harper Hospital student training course, now in North Africa; Lavonne Marsh, staff dietitian, Harper Hospital, stationed at Camp Beal, awaiting orders for overseas service; Beryl Becker, Butterworth Hospital, stationed at Camp Claiborne; Barbara Dell, Turner Field; Betty Fiast, Fort Meade; Janet Fretz, stationed in the South Pacific; Catherine Jackson, Truex Field; Ruth Kerkes, Fort Sam Houston; Mary Grace Ogden, Bergstrom Air Field; Grace Stumpf, Blodgett Memorial Hospital, now in North Africa; Elinor Wakefield, stationed at Topeka, Kansas; Jane Billyead, Mary Lou Seeley, Rosemary Jarussi, Mable Soderholm, Rita Kleffner, and Therese Agnich have also entered the armed services. Sarah Jenks, formerly at Sparrow Hospital, Lansing, recently joined the WAC and is now second lieutenant, stationed at Newport, Rhode Island.

Recent marriages include that of Evelyn Foster, Henry Ford Hospital, to Mr. Leslie Lundgren; Gertrude Kleist, also of Ford Hospital, to Mr. Walter Bury; and Margaret Navin to Dr. Vernon Blasha.

Margaret King, Helene Ebling, and Edith Shaughnessy are now staff dietitians at the Henry Ford Hospital. Other appointments include: Mary Jane Renwick, to Harper Hospital; Ethel Heaberlin, head of the Dietary Department, St. Mary's Hospital; Elizabeth Taylor, dietitian at Woman's Hospital; and Mrs. Lucille Crandall, at Receiving Hospital.

**New Jersey Dietetic Association.** Officers and section chairmen include: president, Irma Donnelly, Glen Gardner Sanatorium; president-elect, Flora Mathison, Murray Hill Hospital, Summit; vice-president, Marjorie Louis, Beth Israel Hospital, Newark; secretary, Elizabeth McHugh, Orange Memorial Hospital; treasurer, Elsie McKay, Hackensack Hospital; Diet Therapy, Edna Frohein, Muhlenberg Hospital, Plainfield; Administration, Sophia Morris, Beth Israel Hospital, Newark; Community Education, Miss Mathison.

An executive meeting was held November 3 at Newark to discuss changing the date of the annual meeting. At the fall meeting, November 18, at St. Barnabas Hospital, Newark, the Army was

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# "Why does our wine turn sour, M. Pasteur?"

It was 1865 when Louis Pasteur showed the wine makers of his native France how to keep their product from souring by heating it to about 145° F.

The world was slow to see the value of "pasteurization." Some thirty years later, when the first American dairy began to sell pasteurized *milk*, the move met bitter opposition.

"Fraud and nonsense," cried competitors. But doctors noticed that the death rate dropped where pasteurized milk was used.

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much in evidence. Lieutenant Rhode of Halloran General Hospital spoke on "Rehabilitating the Returned Soldier"; Lieutenant Lord, on "Penicillin Therapy and Its Relation to Diet." Capt. David Kempner stressed the need of the Army for dietitians. Other speakers included W. Crane Lyon, executive secretary, Hospital Council of New Jersey, and Winifred Cushing, who gave a synopsis of the Pittsburgh convention.

**Oklahoma Dietetic Association.** Officers for 1943–44 are: president, Mary Alice Bolt; president-elect, Veda Bailey; vice-president, Muriel Tice Nelson; secretary, Esther Dinwiddie Phillips; treasurer, Marguerite Ross. Section chairmen are: Administration, J. Marie Melgaard; Diet Therapy, Florence Fritton; Community Education, Maxine Turner; Professional Education, Lucy W. Woodson. Officers for the Oklahoma City association for the coming year include: president, Mrs. Lucy Woodson, Y.W.C.A.; vice-president, Leona Whipple, University Hospitals; secretary-treasurer, Mrs. Mary Moran Sellers, Wesley Hospital.

Ellen McMurray, University Hospitals, resigned October 31 to enlist in the Army. She will be stationed at La Garde Hospital, New Orleans.

Recent appointments include: Irene Chapman, Northeastern State Teachers College, Tahlequah, now head dietitian at Cordell Dining Hall, Stillwater; Mary Gertrude Gray, Methodist Hospital, Fort Worth, now buyer for Oklahoma A. & M. College Food Units; Mrs. Betty Jo Enos Bell, now assistant dietitian at Murray Dining Hall, Stillwater; Maurine Meier, now assistant state health nutritionist. Daisy I. Purdy, head, Household Science Department, Oklahoma A. & M. College, is on a year's leave of absence for further study and experience in the commercial food field.

The Oklahoma A. & M. College Food Units now feed military personnel exclusively, including Waves, Naval trainees, Army Specialized Personnel, and the 90th College Training Detachment, totaling 12,500.

Announcement has been received of the marriage of Esther Mahoney, formerly of St. Anthony Hospital, to Aviation Cadet James Gregory, Winfield, Kansas.

Florine Craig and Ellen McMurray, July graduates of the University Hospitals training course, are now ward dietitians at Children's Hospital and University Hospital, respectively. Betty J. Paul was married in August to Dr. James E. Wykoff, practicing dentist in Oklahoma City. October graduates and their appointments include: Marian Helbing, ward dietitian, University Hospital; Bernice Newsom, Jefferson Davis Hospital, Houston; June Popma, John Sealy Hospital, Galveston. Students entered in the University Hospitals training course in July and September include: Ramah L. Gaston, Montana State University; Eileen E. Haxel, Iowa State College; Jean H. Hutchison, Oklahoma A. & M. College; Mattie L. Robertson, Texas State College for Women; Janice K. Eckler, Florida State College for Women; Rosemary J. Elotte, Louisiana State University; Dorothy J. Gartung, University of Oklahoma; Mildred H. Kidd, Georgia State College; Lorraine B. Lemont, Mount Mary College.

August graduates of the St. Anthony Hospital training course have received the following appointments: Lorraine Dailey, St. Bernard's Hospital, Chicago; Genevieve Gales, Deaconess Hospital, Freeport, Illinois; Sister M. Josephine, St. Joseph's Hospital, Marshfield, Wisconsin; Elaine Magdel, St. Frances Hospital, Freeport, Illinois; Donna Thompson, St. Mary's Hospital, Rochester, Minnesota. Students accepted August 1 included: Mary Beakey and Jane Lea Slater. Mount St. Scholastica, Atchison, Kansas; Betty Weber and Mary Hemmer, St. Mary's College, Xavier, Kansas; and Dolores Buckey, Ohio University.

August graduates of the Oklahoma A. & M. College training course have accepted the following positions: Glenna Parkin and Gertrude Entz, 90th College Training Detachment Mess Hall; Thelma Thompson, St. Luke's Children's Medical Center, Philadelphia. Students for 1943–44 include: Jane McCullough, Ohio University; Dorothy Leonard, St. Catherine's College, St. Paul; Beverly Eckwall, Iowa State College; Melba White, Oklahoma College for Women; Louise Knox, Iowa State College; Martha Ann Russell, University of Arizona; Jane McCorquodale, Texas State College for Women; Marjorie Harper, Kansas State College; Beverly Jane Broadwell, Louisiana Polytechnic Institute.

**Philadelphia Dietetic Association.** A meeting held in cooperation with the Army November 30 at Drexel Institute was attended by about 500 dietitians. Speakers included representatives of the Officer Procurement Service and the Medical Department, A.U.S., and Army dietitians now in service. Army films were shown and seven different uniforms worn by the Army dietitian were exhibited.

Recent appointments include: Clara Carrison, to Russell Sage College, Troy, New York, as a teacher; Mrs. Sophie Levitt, to Philadelphia General Hospital, as teaching dietitian. Mildred Duff, Lankenau Hospital, has received her commission as an Army dietitian. Mrs. Mary Tyson Dugan, St. Luke's and Children's Hospital, has received her commission as Ensign, assigned to the food research section of the Navy.

A joint meeting with the Philadelphia Hospital Association was held December 15 at the Pennsylvania Hospital, with Helen Seago, Episcopal Hospital, presiding.

The OPA has requested the cooperation of the association in helping to maintain ceiling prices by discouraging infractions and to stamp out black market activities in the Philadelphia area.

**Pittsburgh Dietetic Association.** The association wishes to express gratitude to all the dietitians who helped make the national convention such a success and those who came to lend their support.

The preliminary plans for training courses for student dietitians at Presbyterian and Allegheny General Hospitals have been approved by the Executive Board pending final inspection by the Educational Director, Gladys Hall.

Orleana Casey, Miami University, and Joanne De Gaas, Hood University, have begun training at Presbyterian Hospital. The first class of student dietitians at Allegheny General Hospital will probably begin about the first of the year under the direction of Ruth Silvester, chief dietitian.

Recent marriages include that of Frances Baker to Mr. Eugene J. Mundorf; Dorothy Frank, Allegheny General Hospital, to Ensign Samuel Alexander; and Jennie Barton, Presbyterian Hospital, to Lt. Richard Nichols. The engagement of Louise O'Connor to Pvt. (1st cl.) Joseph J. Normile has been announced.

Recent appointments include the following: Mary A. Isaacs, Sunny Acres Sanatorium, Cleveland, to Montefiore Hospital, replacing Emma McCormack; Marion Mock, Good Samaritan Hospital, Cleveland, to Allegheny General Hospital, replacing Mrs. Mundorf; Mary Lou Gregory, Shadyside Hospital, to Allegheny General Hospital as therapeutic dietitian, replacing Martha Ellen Study, who has been appointed cafeteria dietitian at the St. Louis University Medical School.

Helen Baum of Seton Hill has been accepted by the Waves. Mary Corozza replaces Miss Baum at Seton Hill.

Margaret Fitzgerald and Jeanne Arbogast Hiles have been added to the staff of West Penn Training School; Nancy Phillips, having completed her training at Shadyside Hospital, has been appointed to the staff; and Helen Dineen, Pittsburgh Hospital, has replaced Mrs. Estelle Yamshon at Magee Hospital.

Word has been received from Lt. Eleanor I. Johnston, formerly of the Pittsburgh District Dairy Council, that she has arrived at Camp Rucker, Alabama.

**News From Our Advertisers and Exhibitors.** A folder on "War Model Food Conveyors," published by *S. Blickman, Inc.*, Weehawken, New Jersey, describes units built of "less critical" materials, including: electrically-heated food conveyors available in 2 basic models with 8 different top arrangements for various serving capacities, tray service trucks, a heated tray conveyor, a dish truck, and a nourishment truck. All equipment listed is, of course, available only when suitable priorities are furnished.

The November issue of the *Paper Cup and Container Institute's Single Service News* gave considerable space to a report of the A.D.A. Pittsburgh meeting. This issue also gives details of WPB's Direction 2 to Priorities Regulation 3, issued October 29, concerning distribution of paper cups and containers. Paper cups and food containers for in-plant feeding may be ordered on blanket MRO ratings until January 31, and hospitals may make application on Form WPB-541 (formerly PD-1a) for special ratings to secure paper cups and containers for food service to patients. Men and women in the armed services and war workers are given preference in filling orders. According to a report contained in this issue, food prepared in the main kitchens of the Chance-Vought plant in Stratford, Connecticut, is rushed by truck to the dining room of a smaller plant 6 miles away, where it is served with paper plates, cups, spoons, and bowls since there are no kitchen or dishwashing facilities.

Recent leaflets prepared by Mary Ellen Baker, director, Home Economics Division, *National Biscuit Company*, 449 West 14th Street, New York, include: "Eat Well in Wartime!" containing 6 family-size recipes incorporating Nabisco Shredded Wheat, among them shrimp baskets, chicken timbales, meat balls, and meat loaf; "Taste-Tempting Recipes with Nabisco 100% Bran"; and "Try Wheatsworth Flour for Delicious Wartime Recipes." "Quantity Recipes for Camps," adaptable to school, club, tea room and community group menus is still available, also the leaflet "How to Give Your Family a Balanced Diet" containing colored sketches illustrating use of the key foods recommended by the National Research Council. For the benefit of those not already familiar with it, Miss Baker states that *Cracker Chatter*, published by the National Biscuit Company, is issued 6 times a year and contains news of all new Nabisco products together with recipes appropriate to the season.

Six awards were presented by the *Westinghouse Electric & Manufacturing Company*, Mansfield, Ohio, to 4-H Club members on the basis of reports concerning their electrical studies and projects, one of the goals of the contest being to find methods of best utilizing electric power as an agricultural aid in wartime.